Journal of Home Economics

Periodical
VOLUME 35 NUMBER 4

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DETROIT

Symposium on Soybeans
W. D. Salmon, Jane K. Hale, Jean I. Simpson, and Helen T. Parsons

Status of Household Equipment
Earl C McCracken

How War Housing Is Programmed
Coleman Woodbury

Training for War Housing Management
Jean Coman

Home Dehydration of Chili
Edith M. Lantz

Dry-Cleaning and Laundry Services in Wartime
J. Fred Oesterling, Dorothy Siegert Lyle, and Ruth M. Howorth

April 1943

Published by
AMERICAN HOME ECONOMICS ASSOCIATION
WASHINGTON, D. C.

In Our Next Issue . . . . . .

THEY'VE JOINED THE UNION

Last June a group of Baltimore household employees were organized into a union—the first of its kind in the USA. JEAN COLLIER BROWN of the CIO will tell what is happening as a result of the union program.

WARTIME DEVELOPMENTS IN FURNITURE

MERLE FORD of the division of home economics at Michigan State College went to Grand Rapids to interview men in the furniture companies last month and will report her findings.

RETRENCHMENT ON THE HOME FRONT

A homemaker who taught foods and nutrition courses before she married a research man and who has faithfully kept the family's accounts will give her personal experience in wartime budgeting.

WHAT'S THE BEST WAY TO CAN TOMATO JUICE?

HAZEL HAUCK of Cornell University will report her findings in tests of juice canned in unlined and enamel-lined tin compared with that put up in glass, and also of juice squeezed from hot pulp as compared with that expressed from the tomatoes cold.

A SCHOOL LUNCH TOMORROW

The adjustments being made in Minnesota to save the school lunch program, now that the WPA is being liquidated, will be discussed by BENA JOHNSON, state supervisor of the WPA school lunch project.

AND A MEDLEY OF OTHERS

Including an article on the credit bureau as a community resource by ANN AIKIN, a report on San Francisco's lunch box derby by GERTRUDE CHRISTY, and one on a teacher's community experiment by BERNICE HAGERMAN.

THE JOURNAL OF HOME ECONOMICS is published monthly, except July and August, by the American Home Economics Association, 620 Mills Building, Washington, D. C.

Rates: $2.50 a year. Extra postage: Canadian 25 cents, foreign 50 cents. Single copies 30 cents.

Active members of the American Home Economics Association pay $3 national dues in addition to state dues and receive the JOURNAL OF HOME ECONOMICS, $2 of the dues being assigned to JOURNAL subscription.

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2 cups cooked Rice
1 teaspoon Salt

Drain corn. Melt 1 tablespoon butter in skillet; sauté green pepper. Add 1 tablespoon butter, corn, rice and salt: continue to sauté for 10 minutes, stirring frequently with a fork.

Serves 8. Makes a #2 can of corn go twice as far.

What to Do Before You Start to Make a Dress

This information is printed as a convenience to you, to help your students get a good start on their Spring sewing. We suggest that you post this page on your bulletin board, make copies for individual distribution, or write to us for reprints.

MOST JOBS are done better, and more easily, if before you start, everything with which you'll work is assembled in readiness. This is just as true of making a dress as it is of making a cake. The suggestions given here are designed to act as a helpful check list of things to do before you start to sew.

1. *THE SHOPPING EXPEDITION*

Buy your fabric and pattern at the same time.

Check your pattern to make sure the fabric you select is the right type to make up well in that particular pattern.

Get thread to match your fabric.

Check your pattern for other things you may have to buy . . . lining, hem-binding, decorative buttons, snaps or hooks and eyes, canvas for stiffening, belting. (Consider whether you have any zippers that may be salvaged from discarded dresses.)

2. *"SETTING UP SHOP"*

For home sewing, a work center is sometimes the most difficult thing to plan. Perhaps you must do your cutting-out on the dining-room table or the living-room floor. If so, plan your procedure so that you can finish at least the cutting before there are interruptions.

If you can fix up some small working center, your job will be that much easier.

. . . If you're using a machine, see that it is ready for action before you start. If you're going to use unaccustomed attachments on your machine, practice on an odd scrap of fabric, and be sure you know how before you sew the actual fabric.

. . . Set up ironing board and iron, ready to press hems and seams as you baste.

. . . It's a good idea, if you can't take up the rug under your working space, to spread paper over it so that scraps, lint, and threads won't become embedded in the carpet. It's a cleaner surface, and easier to clean up afterward.

3. *GATHERING THE NECESSITIES*

Here is a check list of things you'll need and should have ready:

Tape measure
Sharp scissors with long cutting blades
Small scissors for threads and snips
Plenty of pins
Right size needles
Thimble
Basting thread

NOTE: As the scarcity of pins and needles is increasing, be sure that none get lost or thrown away.

4. *BEFORE ALL*

Choose a fabric that will justify the time and effort you put into making a dress. The only sure way to judge fabric quality is by an informative label such as the CROWN* Tested label, to be found on CROWN Tested Rayon Fabrics. It will give you full information about the construction and care of the fabric and a true prediction of fabric serviceability.

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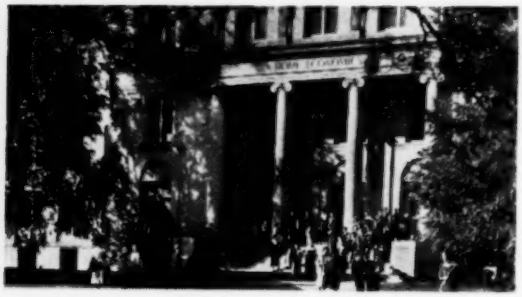

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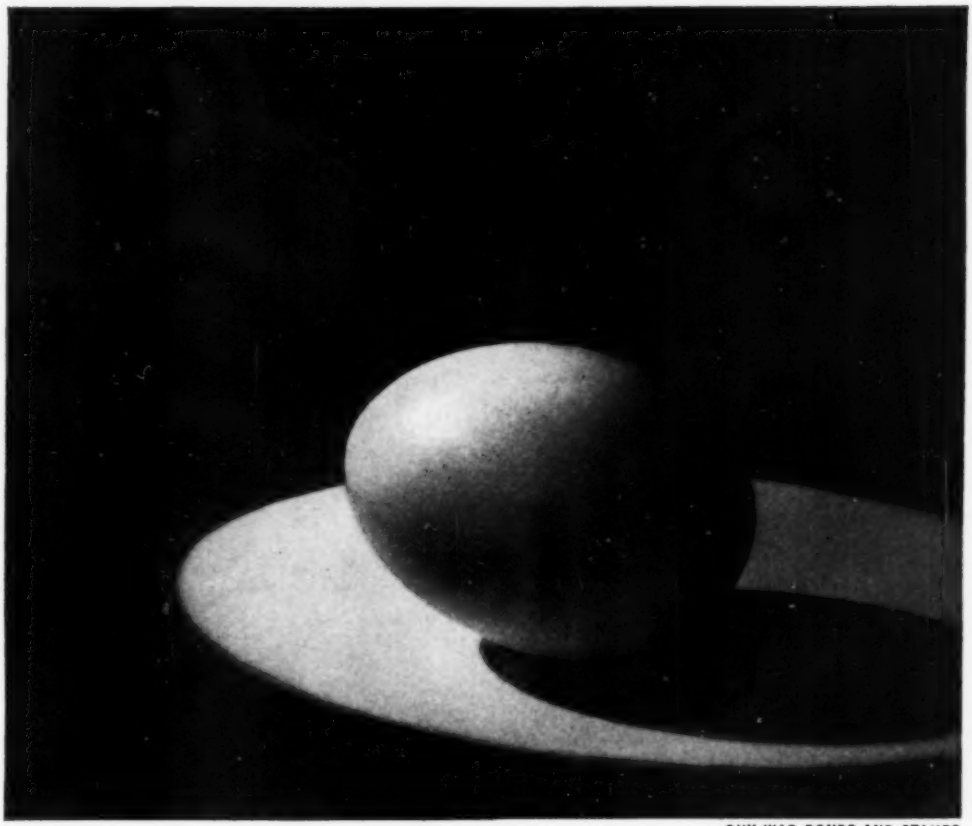

BUY WAR BONDS AND STAMPS

The egg of the month

"The one egg we are allotted each month is rarely obtainable in the shops, and if bought in the black market, costs about fifty cents. The hens are so poorly nourished they won't lay. I know a priest in a village near Cannes who performs the marriage ceremony only for eggs, and refuses to accept money."

Quoted from "How We Live in France," in the January, 1943, *Reader's Digest*, condensed from December 15, 1942, *Vogue*.

IF YOU had only one egg a month, what a banquet that egg would be! . . . The tragedy of France accents America's good fortune. Hens here are well-nourished—and working overtime to keep you well-nourished too!

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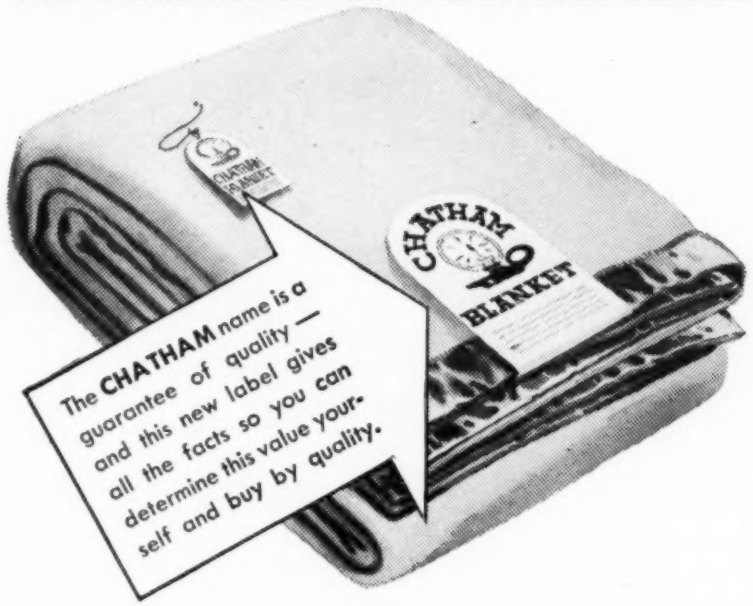
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Washington News . . .

• OPA's War Price & Rationing Boards are to appoint price panels to help inform retailers and consumers about rationing. Each panel will need 10 to 12 volunteer "price panel assistants" who will have intensive course on rationing programs, pass test on subject matter, take oath of service. These assistants will visit stores to clarify OPA orders, hear consumer complaints, act as friendly aide in both camps, report persistent violations to OPA officers but in no case initiate court action or testify in court. Another job for home economists: to recruit these assistants.

• March 29 brought rationing of meats, fats, canned fish, most cheeses—all lumped together for purchase with 16 points a week in red coupons. OPA advises using 12 of 16 for meats, fish, cheese; 4 for fats. Each retail meat cut must be stamped with number indicating slaughterer. Farmer who sells meats must apply to USDA, get permit to sell and number to stamp on his meats. He must take coupons from buyers as store does, mail coupons each month to local War Price & Rationing Board. He needs no permit to sell butter but must collect & turn in coupons. If he has meats he cannot ethically use his red coupons to buy meat. She who buys unstamped meats, above ceiling prices, or without giving up her red stamps is a partner in the Black Market which makes yet more grave our serious food situation and menaces the health of her family by serving uninspected meats.

• April 1 brought dollar-&-cents ceilings for retail pork cuts—ceilings which must be posted. Other meats have old ceilings.

• March 12 AHEA wired OPA Administrator Brown promising that AHEA members would help educate public to understand, use grade labels, ordered for 1943 pack of fruits & vegetables. Job for Information Service Corps!

• Wartime rayon hosiery models—made to federal specifications, grade labeled, reasonably priced—will be here after April 15, unless pressure from the trade forces OPA to backtrack. MPR 339 orders that rayon hosiery carry grade label (A—Standard, or B—Substandard), gauge or number of needles, and ceiling price (much below what some shops have been charging). OPA aim: to conserve rayon, allow none to go into hose-for-a-day.

• Report of National Education Association: states have issued 37,000 emergency teaching certificates (9 times normal), still have 13,000 vacancies in elementary and secondary schools. Some teachers have gone into armed forces; others into better paying jobs. Emergency treatment proposed: Thomas-Hill bill (S637) for $300,000,000 to keep schools open, equalize educational opportunities among and within states. Hearings April 6, 7, 8 in Senate education and labor committee.

• Nutrition work has been shifted from Office of Defense Health & Welfare Services. Dr. Helen Mitchell now is chief nutritionist in Office of Foreign Relief & Rehabilitation headed by Governor Herbert H. Lehman. Marjory Vaughn and Mabel Stimson are on staff of nutrition and food conservation branch of USDA's Food Distribution Administration. Plans for field staff haven't yet jelled.

• Mrs. Bertha Friant is one of 3 assistant directors under Agricultural Labor Administrator Wayne Darrow in USDA's organization to recruit 3½ million persons for the U. S. Crop Corps. Her job: to round up women, who must make a large percentage of the Corps. Extension Service is handling recruiting in rural regions; OCD & U. S. Employment Service, in cities—with YWCA and women's clubs aiding. Goal for nonfarm women for year-round farm work is 10,000; for crop season of 1 to 4 months, 50,000; for short, peak-of-the-harvest periods, about 300,000 more. Nonfarm youth will also make large part of Crop Corps. Age minimum for boys, 14, though most will be 16 and 17; for girls, 18.

Journal of Home Economics

Vol. 35, No. 4
April 1943

Soybeans for Human Food

W. D. SALMON

Dr. Salmon heads up research work in nutrition at the Alabama Experiment Station and is the State Nutrition Council chairman.

SHOULD edible soybeans have a place in a nutrition program for Alabama? This is a question that the Alabama Agricultural Experiment Station has attempted to answer in a series of experiments started in 1936 and reported last year in the Station's Bulletin 255. The results obtained show that certain varieties of soybeans are palatable, high in nutritive value, and easily grown; they should be considered as a standard vegetable to be included in all home gardens in the state.

The Need for Soybeans

Studies made by the Station of selected samples of the population on farms and in small towns in Alabama have revealed that the diets of a large portion of the population are dangerously low in foods of animal origin. This is true both in the low- and medium-income levels of the small-town population and in the farm population as a whole.

The average annual consumption of lean meat, poultry, cheese, and fish in the small towns at the time of the studies was only 65 pounds in the low-income-level white group (with incomes under $1,000 per year) and 61 pounds in the low-income Negro group (with incomes under $500 per year); in the farm group it was only 44 pounds per year. The total gross cash income of Alabama farm families averages under $500 per year.

In the small towns the intake of milk and eggs was extremely low. The intake of eggs was also low on the farms, but the average intake of milk was fairly satisfactory. However, thousands of families even on the farms had an inadequate supply of milk.

As a result these diets were low in all the water-soluble vitamins, particularly in riboflavin and nicotinic acid; they were also low in protein and calcium and slightly low in iron. The diets were poorer in protein than indicated by the total daily intake because of the large proportion of cereal protein.

Corn meal and wheat flour supplied 38 per cent of the protein in the farm diets, 47 per cent in the low-income white diets in the small towns, and 55 per cent in the low-income Negro diets in the small towns. The need for a low-cost protein food which would at least partially remedy the deficiencies of these diets is thus definitely indicated.

Nutritive Value of Soybeans

The high nutritive value of soybeans as compared with cowpeas, which are widely used in the South, is shown by the data in the accompanying table. Data on lima beans, navy beans, and peanuts are also included.

It is apparent that soybeans have their greatest value as a source of protein, which is sorely needed in the low-income-level diets in Alabama. Not only is the protein content of soybeans nearly double that of other beans and peas but the quality of the soybean pro-

tein is superior. The protein of cooked edible soybeans was nearly equal to casein in experiments at this station. Although peanuts are also a good source of high quality vegetable protein, they are considerably lower in protein content than soybeans. The latter are also a good source of calcium, iron, and thiamin.

A serving of 100 grams of mature soybeans would supply 40 per cent of the protein, 25 per cent of the calcium, and over 60 per cent of the iron required by the adult for one day. Soybeans, like most vegetable materials, are low in riboflavin and nicotinic acid. They are not so good a source of nicotinic acid as are peanuts.

Major nutrients of soybeans and other legume seeds

FOOD	PROTEIN	CALCIUM	IRON	THIAMIN	RIBOFLAVIN	NICOTINIC ACID
	per cent	*per cent*	*mg per 100 gm*	*mg per 100 gm*	*mg per 100 gm*	*mg per 100 gm*
Soybeans, dry	40	0.212	10	1.1	0.32	4.8
Cowpeas, dry	21	0.100	6	0.9	0.30	—
Lima beans, dry	18	0.071	9	0.6	—	—
Navy beans, dry	22	0.140	9	0.6	—	—
Peanuts, dry	26	0.067	2	0.9	0.30	17.0

Cooking Quality and Palatability

No matter how high the nutritive value of a food, it would not be generally used unless it "tasted good." Fortunately numerous varieties of soybeans are easily cooked in either the green or mature forms; they have a rich flavor pleasing to most people.

Even some of the field varieties like Delsta and Tokio are readily cooked and have an excellent flavor. Rokusun is, in my opinion, the best all-round variety for the South. It is a relatively large bean; it yields well and ranks near the top in cooking quality and palatability; and it is high in nutritive value as well.

Utilization of Soybeans

The effective utilization of soybeans for the improvement of low-income-level diets requires that they be produced in the home garden or reach the consumer at as low a cost as possible. Any unnecessary processing which adds to the cost is undesirable. In general, the use of soybeans as beans is to be recommended; there are several recipes for using them as such, either in the green-vegetable stage or in the mature stage.

Incomplete Substitute for Animal Foods

Soybeans are not a complete substitute for milk, meat, eggs, and cheese. It is important from an economic as well as a nutritional point of view that Alabama farmers make every possible effort to increase livestock production. It will be a long time, however, before this state produces enough livestock products to feed its population adequately; it produces only about half enough at present.

Until livestock production becomes more general on Alabama farms, there will be a low consumption of animal products by the farm population. Also, low-income groups in the towns and cities will be unable to purchase adequate amounts of these products. Moreover, military and Lend-Lease requirements for foods of animal origin will doubtless increase much faster than the production of these foods can be increased by the farmers.

Supplementary sources of protein may, therefore, become desirable for the whole population, irrespective of income level. Under such conditions, edible soybeans can become a valuable supplement for use in this country as well as for shipment overseas. Their production for human food in 1943 should be greatly expanded.

Soybeans in the Diet

JANE K. HALE

Mrs. Hale joined the experiment station staff of the University of Tennessee in 1937 to work on the station project "Home Production of Food Supplies." Having lived among the Plateau people all her life, she is well acquainted with their customs. She is author of Station Circular No. 74 "Soybeans in the Diet."

THE practicability of using the soybean in the diet deserves special consideration at this time, since it can improve the diet materially without adding to its cost. It also lends itself to the program of home production of food supply, and its use may be especially valuable where pork consumption is extremely high or where the lack of lean meat results in a low-protein diet. It is significant that it is already the mainstay of millions of people living on small areas of land in other countries, largely, no doubt, because its cost of production is about one-third that of meat, which it well replaces, and because it is relatively a foolproof crop from the standpoint of insect and disease attack.

An Aid to Economy

The greatest benefits from the standpoint of reducing food costs will undoubtedly be obtained by families who raise the soybean in the home garden. Approximately one-sixth acre will supply a large family with a sufficient quantity to constitute an appreciable part of the dietary. Families unable to grow their own soybeans can reduce the cost of meals by utilizing rather fully commercial forms of the soybean.

The following table of relative meal costs, based on nutritive values and present prices of the raw bean and commercial products, indicates the economy resulting from its use.

The Problem

The United States Department of Agriculture lists 40 firms manufacturing a total of 36 soybean products. Scores of laboratory-tested soybean recipes have proved palatable.

How practical are these in the average home? And particularly in the rural home where there are facilities for growing the bean but where innovations are seldom tried? It is possible to make wholesome soybean milk, but will the average family make it?

The soybean has certain features which hinder its acceptance in the average dietary: its association with cow feed, its objectionable odor during preparation and sometimes even in the final product (not objected to by those who give it a fair trial), and the difficulty in shelling the green bean for canning.

Meals of equal nutritive value showing savings to be effected by using soybeans in various parts of the menu

MENU	RELATIVE MEAL COST	
	When Soybeans Were Used	When Soybeans Were Not Used
Meat Equivalent (Protein)	$0.05*	$0.18
Vegetable	.03*	.04
Salad	.07*	.10
Bread	.04*	.02
Dessert	.10	.10
Butter	.04	.04
Coffee	.02	.02
Total	$0.35	$0.50

* Indicates where soybeans were used.

Setting Up the Study

During the period 1936–42 the Tennessee Agricultural Experiment Station investigated the possibilities of soybean consumption among low-income rural families on the Cumberland Plateau as part of a research project on home production of food supplies. We

wished to find out which forms of the bean could be used to the best advantage, considering the limitations of education and equipment. Also we wanted to determine how much effort would be required to get families to accept the soybean as part of their diet and how long the effect would carry over after withdrawal of pressure.

Six families typical of the locality, which is strongly bound by dietary tradition, were selected for the soybean-diet trials in 1936 and were carried through 1937. In 1938 four additional families were included and carried through 1939. From 1939 to 1942 the carry-over effect was observed. The Hahto variety of soybean was used because of its size and freedom from shattering, and each family grew its own supply.

Realizing the difficulties involved, we made every effort to popularize the soybean as a dietary item. We used a community kitchen as a meeting place for the families involved and there prepared and served soybean dishes at their best. We followed up in the homes and repeatedly gave dietary assistance to each family. When we learned by grapevine that someone had said that "the white-collar folks don't have to eat soybeans but make us do it," we immediately tried to glamorize the soybean by inviting all the local dignitaries to a formal, well-advertised dinner, where the soybean constituted three-fourths of the menu. Also, we arranged for a special dinner for all the schoolteachers of the community, grade and high school, in the home economics building and again featured the soybean. These efforts created a good deal of interest in the soybean and brought to the experiment station several requests for assistance in demonstrations of soybean dietary preparations. A neighbor of one of the more successful soybean consumers started to grow soybeans of his own volition and was so delighted with the commodity that he threshed his first two crops in the family living room when room elsewhere was not available.

We kept in mind the habits of the local people as we adapted recipes to local use. A great deal of baking and extremely high consumption of white flour and corn meal are characteristic of rural folk on the Cumberland Plateau; it was quite logical, therefore, that 60 per cent of the soybean consumption was in the form of locally ground meal used in breads.

Results

As local families can large amounts of produce, our six families were asked in 1937 to can the green bean in sufficient quantities to test its usefulness in the canned form. While the supply lasted, its consumption was equal to that in any other form, but difficulties in shelling the green bean proved an effective barrier to future use in this form unless the station staff gave close supervision and help. Two of the families attained a consumption of 35 pounds per adult equivalent a year without difficulty. Considering the efforts expended, this figure may be considered maximum expectancy under local conditions.

In nearly every case the families praised one or more of the soybean dishes. The children were especially delighted with the fried and salted ones, many carrying them to school in lunch baskets.

The experiment station staff withdrew its influence from all families January 1, 1940, and now—three years later—the soybean has practically ceased to be a part of the dietaries of these families. The families involved were slower to take up dietary innovations than were families in some other sections of the USA. Also, the limited quantity of soybeans produced necessitated hand threshing and cleaning, and the families objected to the tediousness of this process, although they had plenty of time on the small farm units for such work. (The same objections were raised to producing their own wheat in family dietary quantities which required hand cradling and threshing, even though these people are noted for their flour consumption.) If commercially-produced, cleaned beans were available locally, home consumption of this commodity might increase materially.

The coming of prosperity has also been a factor in discontinuing the dietary use of the soybean. The families involved in the experiment were at one time coal miners and small mill workers, and their living standards had been high. When the experiment was set up in 1936, they were being rehabilitated by the Farm Security Administration and were quite willing to make an effort for their own betterment. Since 1940 high wages have again increased the expenditure for foods and diminished the incentive to produce and process food at home.

In this study the majority of available recipes were ruled out without trial, particularly those requiring a great deal of attention, such as soybean milk and most items made from the mash. The eight soybean products consumed in considerable amounts were, in order of their acceptance: soy-corn bread, soybean biscuits, soybean rolls, soybean muffins, boiled soybeans, salted soybeans, baked soybeans, and soybean-meat loaf.

Soybean Products

The most successful method of using the soybean proved to be in combination with whole-wheat flour or corn meal and with yeast breads of all types.

Because of their high oil content, soybeans do not grind readily without preliminary drying by partial roasting. For drying, the beans were placed in thin layers in trays in the oven and heated until they began to crack but they were taken out before they turned brown. This process also drove off a great deal of the objectionable flavor and produced an appetizing odor in the flour. Beans should be stirred to prevent burning while in the oven.

Cooling the beans before grinding improved the condition of the meal and reduced milling trouble. Preroasted soybeans were ground at local grist mills, producing a meal somewhat coarser than wheat flour but highly satisfactory for practical use. This meal can be used half-and-half with corn meal or whole-wheat flour. It cannot be mixed in as high proportion with white flour unless yeast is used. Soybean meal contains little or no gluten and bakes differently from wheat flour. More yeast was required for yeast breads in which soybean meal was used.

Soy-Corn Bread

- 1 cup corn meal
- 1 cup soybean meal
- 3 teaspoons baking powder
- 1 teaspoon soda
- 1½ teaspoons salt
- 1 egg
- 3 or 4 tablespoons shortening, melted
- 1 tablespoon sugar, if desired

Mix and sift dry ingredients. Combine milk and melted shortening. Add the dry ingredients to the liquid and mix well. Beat egg and add to the mixture. Bake in greased pan in moderately hot oven (400° to 425°F) 20 to 30 minutes.

Soybean Biscuits

- 1½ cups white flour
- ¾ cup soybean meal
- 4 teaspoons baking powder
- 1 teaspoon salt
- 4 tablespoons shortening
- ¾ cup milk or water

Mix and sift dry ingredients. Cut in shortening. Add liquid gradually to make a soft dough. Roll one-half inch thick on a floured board. Cut with a floured biscuit cutter. Bake in a hot oven (450°F) 12 to 15 minutes.

Soybean Rolls

- 1¼ cups lukewarm water
- 3 tablespoons shortening
- 2 tablespoons sugar
- 1 teaspoon salt
- 1¼ cakes compressed yeast
- 3½ cups flour (soybean meal may be used in any proportion up to ½)

Bring 1 cup of water to scalding, add shortening, sugar, and salt. Cool to lukewarm, add yeast dissolved in ¼ cup of warm water. Add flour-meal gradually to form a soft dough. Beat vigorously, cover, and let rise in a warm place until double in bulk. Toss onto a lightly floured board and make into desired shape. Let rise and bake in moderately hot oven (400°F). Yield: 18 rolls.

Soybean Muffins

- 1¼ cups whole-wheat flour
- 1¼ cups soybean meal
- ½ teaspoon salt
- 5 teaspoons baking powder
- 3 tablespoons sugar
- 2 eggs
- 1¼ cups milk or water
- 5 tablespoons melted fat

Mix and sift dry ingredients. Combine milk and melted fat. Stir dry ingredients into liquid. Add well-beaten eggs. Fill greased muffin tins two-thirds full and bake in a moderately hot oven (425°F) 20 to 30 minutes.

Delicious muffin variations may be made by adding nuts or dried fruits to the above recipe.

Boiled Soybeans

In this locality the common varieties of dried beans are used almost entirely in the form of boiled or "soup" beans. The dried soybean satisfactorily replaced the common bean in this form but required about one-third more cooking time, not a serious objection where wood and coal ranges are the rule.

The beans are soaked overnight and cooked by either of the following methods: (1) steam pressure cooker for from 30 to 40 minutes at 15 pounds pressure or (2) open kettle for from 4 to 5 hours. Salt pork was preferred for seasoning. Tomatoes and onions may be added during the last period of the cooking.

Salted Soybeans

Soybeans were most successfully prepared for consumption over an extended period of time by frying and salting. In this form they were used in school lunches or whenever a ready-prepared, highly nutritious food was desired. The beans should be soaked overnight, drained, spread on a towel to remove extra moisture, and fried in deep fat. A vegetable fat is preferable, since it burns less quickly and the excess drains off readily.

A wire strainer which will fit into a straight-sided pan and permit lowering the beans into about an inch of melted fat is most satisfactory. The proper frying temperature is approximately 350°F. Frequent sampling of the first batch will soon acquaint one with the stage at which the frying should be discontinued. Usually one cup of soybeans can be fried in one pound of melted fat at a time. The finished product should be drained a few seconds, spread on a towel or brown paper to remove excess fat, and salted to taste.

Baked Soybeans

2 cups soybeans
3 slices bacon
1½ teaspoons salt
3 tablespoons molasses
1 can tomato soup or 2 cups tomato juice
1 diced onion

Cook soybeans until tender, add salt, molasses, tomato soup or juice, and onion, put in baking dish, place strips of bacon on top, and bake in a moderate oven 1½ to 2 hours.

Soybean-Meat Loaf

1½ cups salmon or ground meat
1½ cups soybean pulp
2 eggs
1 cup cracker or bread crumbs
2 teaspoons salt
1 cup white sauce or thick tomato juice

Mix all ingredients thoroughly and shape into a loaf or put in greased loaf pan. If mixture seems too soft, add more crumbs. Bake at 400°F 50 to 60 minutes.

Soy Bread Tried

If soya were combined with enriched flour to make bread, the long-reputed staff of life would really be one of our most complete foods.

Impending milk shortages have fathered the suggestion that soy milk also be adopted. It would be the best replacement available although not a complete substitute. Use in this country has been confined to babies who are allergic to ordinary milk. Technical difficulties make it unlikely that soy milk will soon be generally available, government officials warn. New equipment and production specialists are needed. Keeping qualities must be improved. Then the soy protein must be made into a milk-like suspension. But when treated to remove objectionable flavor, the milk emulsion breaks and protein settles out. Until such problems are solved, it's still a food of the future.—"Soy Flour Bread Tried," *Science News Letter*, January 16, 1943.

Soybean Studies in Illinois

JEAN I. SIMPSON

In September 1941 Dr. Simpson left a teaching position at the University of Toronto to join the staff of the department of home economics of the University of Illinois. Before going to Toronto she had been manager of the Chicago College Club, a member of the editorial staff of the Curtis Publishing Company, and on the food and nutrition faculty at Cornell University.

THE acreage of the soybean crop in Illinois has expanded rapidly during the last decade. As a result, the Illinois Agricultural Experiment Station has taken special interest in problems connected with soybeans and their uses. Extensive investigations which have been conducted in the food research laboratory of the department of home economics are briefly reviewed in this paper.

Among the hundreds of types and varieties of soybeans are to be found wide differences in color, appearance, flavor, texture, and other characteristics which affect their acceptability as food. In a three-year investigation,[1] 466 varieties and selections were tested for their possible use as food, both at the green-vegetable stage and as mature beans. All these varieties were grown by the department of agronomy of this experiment station in its search for varieties that are adapted to this part of the United States.

Place of Soybeans in the Diet

Vegetable soybeans have two potential uses in the United States. They would add variety to the limited list of green vegetables available in many markets in the early fall. And the mature beans could be used to increase substantially the protein and the calorie content of low-cost diets.

The unusually high percentages of protein and oil in soybeans partly explain their unique nutritive value. In both green and dry forms they contain much more protein and fat than do other legumes, but their carbohydrates are lower. Their total ash compares very favorably with competing foods, as do also their calcium and iron. In fact, the calcium and iron of both green and dry soybeans make very favorable showings in any list of foods which are generally considered rich sources of these two elements.

Only a few experiments have been reported in which the utilization of soybean proteins has been determined by feeding to human subjects, but there are many records of the feeding of soybean and soybean-oil cake or meal to both farm and laboratory animals. Research has shown that their proteins are best utilized if the beans are cooked or heated before they are fed. From 76 to 91 per cent of soybean-flour proteins has been shown to be utilized when fed to human subjects. Current information as to the nutritive value of the proteins of cooked soybeans appears favorable if they are suitably supplemented.

Soybeans have been recognized for some time as having special dietetic value where allergies to cow's milk and wheat flour exist. A milky suspension resembling cow's milk in appearance and containing proteins and other constituents can be produced by treating soybeans with water.

Because soybeans have only a trace of starch, if indeed any, they (and particularly flour prepared from them) have been frequently referred to as a diabetic food. Mature soybeans, however, contain about 30 per cent total carbohydrates, and hence should not be considered a diabetic food.

Because of the absence of gluten and starch,

[1] SYBIL WOODRUFF and HELEN KLAAS. A Study of Soybean Varieties with Reference to Their Use as Food. Univ. of Ill., Agr. Expt. Sta. Bull. No. 443 (1938).

soybean flour, when substituted wholly for wheat flour, produces a baked product very different in appearance and texture from the usual one.

Green Soybeans

Soybeans are ready to be used as a green vegetable as soon as the pods have filled out and while they are still a decided green color. As the pods dry and turn yellow, the seeds change color also, but the immature soybean seed is always green, no matter what the color of the dry seed is to be.

The shortness of the soybean season is one of the major problems in using them green. The 17 superior varieties of this study remained green long enough to be gathered for several days, some even as long as 10 days. By planting varieties with different maturing habits, the season for green soybeans could be extended considerably.

Sweetness is one important point of excellence in the flavor of green soybeans. The total sugars begin to diminish immediately after harvesting, and hence green soybeans should be used as promptly as possible after the pods are removed from the plant.

To facilitate removing the fibrous pod, boiling water was poured over the soybeans, and they were allowed to stand in it for 5 minutes. The hot water was then poured off, and the beans were shelled. They were boiled in salted water for 9 minutes and finally drained and judged.

Mature Soybeans

There is great variation in the color, shape, and size of different kinds of soybeans in their mature stage. Only the yellow or light-colored ones were given superior rating in this study, because it was believed that popular prejudice against the others might be expected.

Contrary to the impressions of many persons, most edible dry soybeans swell and cook to a tender condition even more readily than do other kinds of beans. When soybeans have reached their maximum tenderness, they are nutlike in texture. They should not be cooked beyond this stage in an attempt to make them like navy beans.

So far as softening effects were concerned, soaking of the beans was not essential. But the seed coats of the soaked beans slipped off less readily during cooking than did those of the unsoaked ones, their color and volume were improved, and the soaking water seemed to remove some of the strong flavor which was otherwise noticed.

For these tests, the dry soybeans were soaked overnight in distilled water. The following morning they were drained, cooked in salted water for one hour and fifteen minutes, and finally drained and judged.

Rating the Soybeans for Quality

Both green and mature cooked soybeans were judged for quality while hot and also after they had cooled, inasmuch as certain characteristics were more pronounced at one temperature than another. Each variety was cooked and judged on at least two or more different occasions by each of two or three experienced judges, and the final judgment was a composite of all. Also, at times large numbers of men and women were asked to check the opinions of the official judges.

A rating of "very good" was given only to samples which were bright green when immature and light-colored or yellow when mature; that had a sweet, pleasing flavor; and that were tender but not mushy in texture. Testing by this standard eliminated large numbers having little in their favor as food. Shelling time was also considered in rating the green beans, for it is a factor of some importance to the homemaker.

The six varieties rated "very good"—Willomi, Hokkaido, 97155, Imperial, Jogun, and Funk Delicious—might easily be accepted as a new vegetable by the American public.

Chemical Analyses of Soybeans

With certain exceptions, the official methods of the Association of Official Agricultural Chemists were followed in making the chem-

ical analyses of all soybean samples. Determinations were made of moisture, protein (N × 6.25), fat, carbohydrates (total, fiber, and sugars), and ash (total, calcium, and iron). The average percentage composition of 12 varieties of green soybeans at a stage of maturity suitable for use and of 14 varieties of mature soybeans was found to be as follows:

CONSTITUENTS	GREEN SOYBEANS *per cent*	MATURE SOYBEANS* *per cent*
Moisture	70.00	—
Protein (N × 6.25)	12.25	40.57
Fat	5.22	16.55
Carbohydrates		
Total (by difference)	11.07	30.88
Fiber	1.30	4.32
Sugars	4.18	8.95
Ash		
Total	1.52	4.98
Calcium	0.072	0.212
Iron	0.0029	0.0103

* Results are given on a basis of 7 per cent moisture content.

At the stage of maturity deemed suitable for soybeans that are to be used as a green vegetable, the 12 varieties with an average of 70 per cent moisture showed variation between the limits of 79 per cent and 67 per cent. It was not found possible to establish any relationship between the chemical composition of soybeans and their quality from the standpoint of palatability.

Determination of the changes in percentage composition of the soybeans as they matured showed that the percentage of water and of sugar diminished rapidly. Protein and oil, on the other hand, increased during this period.

It can be said of the mature soybeans, as of the green, that no outstanding varietal differences in percentage distribution of constituents was observed, with the possible exception of oil which varied from 13.72 to 20.09 per cent.

Soybean Flours Compared

Soybean flours were made in this laboratory from about 20 vegetable varieties of soybeans to learn whether measurable differences in flavor and other characteristics could be found between them and commercial flours manufactured from field types of beans.

In 1935, 12 vegetable types and 8 field types of soybeans were used in preparing flour, and in 1936, 12 vegetable types and 1 field type were used. The general conclusions were that the best-flavored flours came from the vegetable types; for example, the Imperial and Hokkaido varieties. Some field types (Dunfield, Manchu, and Mandarin, which are common crops in the Illinois area) were rated "poor" for flour purposes.

Preserving Green Soybeans

Extending the season of green soybeans by successful freezing, canning, or drying would be as advantageous as it is with other vegetables. All three methods have been studied in this laboratory.

Some varieties of green soybeans have been preserved by freezing and all those with good flavor as fresh beans retained their good qualities after freezer storage, if they were handled properly. A circular[2] giving directions for freezing soybeans has been published, and this work is still in progress.

Soybeans were also canned in pint- and in quart-sized glass jars in a pressure cooker at 10 pounds for periods varying from 30 to 90 minutes. Green soybeans gathered at undermature, satisfactory, and overmature stages of development were used. Every jar seemed totally free from spoilage, but regardless of the treatment or the kind of beans, they had lost their original good qualities to such an extent that there was no enthusiasm for this means of preservation.

Green soybeans were dried at room temperature (30° to 35°C) by suspending layers of them in the air in cheesecloth hammocks. The dried green beans remained a bright green color, and on soaking regained their original size very readily even many months later. During cooking, however, the beans faded to an unattractive color; the odor and taste were

[2] HELEN KLAAS and SYBIL WOODRUFF. How to Prepare Fruits and Vegetables for Freezer Storage. Univ. of Ill., Agr. Expt. Sta. Bull. No. 510 (1940).

not good; and the texture was too hard to be acceptable. This method of preservation for green soybeans was felt to hold some promise, but needs improvement before it can be considered satisfactory.

Protein Extract from Soybeans

Since one of the unique nutritive features of soybeans is their protein content, an investigation[3] of the nature of this constituent was made. Protein was extracted from two varieties of soybeans and from commercial soybean flakes, and its physical and chemical properties were studied intensively.

Of special interest from a practical standpoint was the observation that the protein substance did not produce a thickening or binding of food ingredients similar to the effect caused by egg proteins in custards or muffins. Neither did its presence interfere with expected reactions of other components during cooking. It was tasteless and wholly unobjectionable as an addition to other foods.

It has been suggested that the protein substance might be incorporated in many food dishes for the purpose of adding to their protein content. The substance is thought to offer possibilities as a new source of food protein and to have the advantages, over soybean flour, of higher protein content and freedom from flavor.

Soybean Carbohydrates

A study[4] was undertaken for determining the identity of soybean carbohydrates and their percentage distribution at different stages of maturity.

[3] Sybil Woodruff, Evelyn Chambers, and Helen Klaas. A Study of Protein Extract from Soybeans with Reference to Its Use in Food. *J. Agr. Research 57* (Oct. 1938), pp. 737–746.

[4] Mabel MacMasters, Sybil Woodruff, and Helen Klaas. Studies on Soybean Carbohydrates. *Ind. & Eng. Chem.* (Anal. Ed.) *13* (July 15, 1941), pp. 471–474.

Reducing sugars and total sugars were both found to decrease as the soybeans matured, and seasonal as well as varietal differences in carbohydrate constituents were marked. The hemicelluloses of one variety of soybean were extracted and fractionated.

Soybeans were found to have a low pectic content, and this fact suggested itself as an explanation for their failure to soften greatly during cooking.

A Study of Eighteen Edible Varieties

The departments of agronomy and horticulture at this experiment station co-operated in a study[5] of 18 varieties of soybeans. Seventeen of these varieties were of the vegetable type especially adapted to use as green beans, but highly desirable also in the ripe state; the other variety was the Illini, which was included because of its special value as a dry soybean.

Co-operative tests were conducted by sending soybean seeds to 54 Illinois counties and also to other states. As a result of this study, the adaptability and acceptability of this vegetable is summarized.

Recipes Using Soybeans

Reliable directions for using soybeans in various ways as food have been in considerable demand. Hence, attention has been given to this practical phase of the use of soybeans. A leaflet[6] has been published in which recipes are provided for cooking and serving green and mature dry soybeans, for using soybean flour in combination with wheat flour, and for preparing special foods in which wheat flour or milk is replaced entirely by soybean products.

[5] J. W. Lloyd and W. L. Burlison. Eighteen Varieties of Edible Soybeans. Univ. of Ill., Agr. Expt. Sta. Bull. No. 453 (1939).

[6] Ways of Using Soybeans as Food. Univ. of Ill., Agr. Expt. Sta. Bull. No. HEE224 (1939).

AHEA Memberships

Total memberships in AHEA aren't yet up to last year's mark, but active memberships were already 344 ahead by March 20: 9361 instead of 9017.

Effect of Different Cooking Methods on Soybean Proteins

HELEN T. PARSONS

Dr. Parsons is professor of home economics at the University of Wisconsin and in charge of Purnell research in nutrition. She has carried on research work at the School of Hygiene and Public Health at the Johns Hopkins University as well as at Yale, from which she received her doctor's degree in 1928.

AFTER the early observation of Osborne and Mendel in 1917 that cooking the raw soybeans of their rations led to increased growth in rats, either, as they conjectured, because of an improvement in the protein or an increase in palatability of the ration, few contributions were made to this subject until the detailed study by Hayward, Steenbock, and Bohstedt in 1936 of the protein values of expeller, hydraulic, and solvent soybean meals, products from which a large part of the oil of the bean had been removed, mechanically in the first two cases and by solvents in the last.

Effects of Commercial Processes

The Wisconsin investigators found that in the samples tested, those expeller and hydraulic soybean-oil meals which were prepared at the higher temperatures and were dark brown in color were nutritionally superior in regard to protein to those which were lighter in color and were prepared at lower temperatures. It was noted, however, that the correlation failed to hold in the case of solvent soybean meal which was light in color but contained an efficient protein.

Effects of Laboratory Procedures

In further experiments, Steenbock and his co-workers observed another discrepancy in this correlation, in that whole soybeans which they ground and then roasted in an electric oven assumed a deepened shade of color but showed practically no improvement in protein quality. However, if the ground soybeans were sealed in a bomb (which prevented the escape of moisture) before being placed in the oven or were autoclaved at 17 pounds pressure (approximately 253°F) for 90 minutes, an improvement in the biological value of the protein resulted.

Effects of Household Methods of Roasting

For several years before the publication of these results just described, many home economics departments had advocated the roasting of soybeans by baking the whole dry beans in an oven at 300°F without preliminary treatment, as a simple and practical method of preparing a palatable product for human consumption. This was, in fact, the forerunner of the present-day "salty soy" products. Hence it was of considerable importance to determine whether the practice was, after all, undesirable from a nutritional standpoint.

In experiments by Parsons, Marlatt, Johnson, and Gray in 1939 two methods of roasting were used: in addition to baking ground soybeans in an electric oven as in the published report, whole beans were heated dry, both in an electric oven and in the oven of a gas range for 30 minutes at 300°F in conformity with household practice. As criteria of changes to be expected from moist heating, a wide range of temperatures and periods of cooking in water and steam, such as would be met in food preparation, were used.

The results fully confirmed the previous observation on the lack of improvement in ground soybeans, baked in an oven, but showed conclusively that the household method of roasting whole soybeans, which was tested,

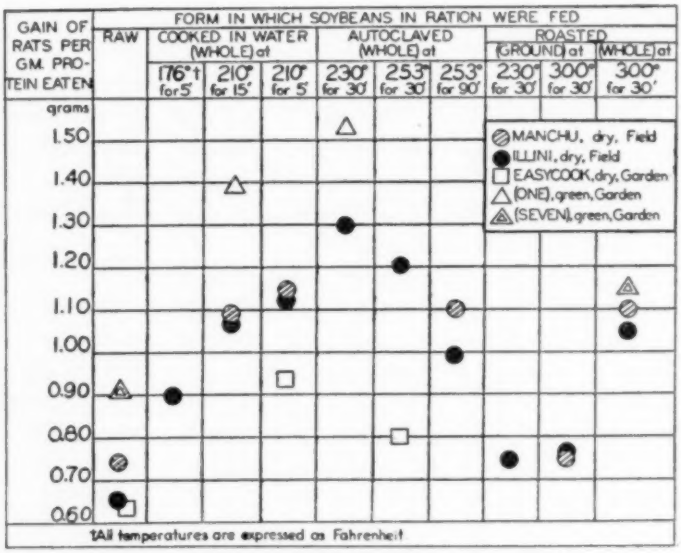
was to be classified as a moist heat process inasmuch as a distinct improvement, comparable to that obtained by boiling the beans for five minutes, resulted. Apparently the tough skin of the soybean had held sufficient moisture long enough in the whole bean subjected to hot, dry air to allow a considerable degree of the characteristic chemical changes to take place in the protein (see chart).

Effects of Moist Heat Cookery

The effects of the types of moist heat cookery (with boiling water and steam) used in the experiment were also interesting. The correlation of increases in protein value with intensified heat treatments held true for only a certain part of the range. The chart shows that, whereas improvement continued regularly throughout that portion of the changes beginning with temperatures below boiling and progressing through increasing periods of boiling and brief, mild autoclaving, increases in time and temperatures of autoclaving beyond this point showed not only lack of improvement over some of the milder treatments but even a declining value.

Presumably, two opposite effects are produced by moist heat: one, beneficial to the

COMPARISON OF THE EFFECTS OF HEAT AND MOISTURE ON THE NUTRITIVE PROPERTIES OF SOYBEAN PROTEIN AS MEASURED BY THE GROWTH OF RATS ON SUPPLEMENTED RATIONS* CONTAINING DIFFERENT VARIETIES OF SOYBEANS PREPARED IN VARIOUS WAYS



* *Experimental Details.* The basal ration containing the various preparations of soybeans was similar to that employed by Hayward, Steenbock, and Bohstedt (1936) except that individual doses of a vitamin B-complex concentrate from rice polishings were fed separately to the rats. The amount of soybean protein in the ration was 14 per cent except in the case of the seven green garden varieties, where the percentage was 18. All rats ate the same amount of the ration week by week, the daily portions being increased somewhat to take care of growth during the eight-week period, the daily intake averaging 6.3 gm. Each group contained five or more rats.

The Illini, Manchu, and Easycook varieties were harvested dry.

The seven named garden varieties of green soybeans (see chart) were: the Kura, the Jogun, and those numbered 86100, 86038, 84668, 86032, and 181A. They were produced on the University of Wisconsin experimental plots and were obtained through the kindness of Professor George M. Briggs.

Roasting the whole beans by frying them in deep fat at 325°F failed to augment the nutritive value until a preliminary soaking was introduced into the method; the improvement in the protein was then at least as great as in oven baking. However, an unfavorable effect on the growth of the rats from the high amount of oil absorbed by the beans was not entirely overcome either in this preparation or in the controls and tended to blur the results.

nutritive value of the protein, is more apparent during moderate degrees of heating; the other, unfavorable, appears to overtake and then surpass the beneficial changes when autoclaving is prolonged or the pressure raised. Such an effect as the second one would tally with the many reports in the literature on the unfavorable influence of drastic heat treatments on various proteins.

In this laboratory, rations containing soybeans which had been autoclaved at two gradations of heating were supplemented with 0.2 per cent of d-lysine with only limited benefit. Without lysine, Illini soybeans autoclaved at 253°F for 90 minutes supported 24 per cent less growth per gram of protein eaten than did the beans autoclaved at 230°F for 30 minutes; when 0.2 per cent of d-lysine was added to the rations the difference between the two was 19 per cent instead.

Commercial Meals Further Improved

It was of interest to know whether the proteins of commercial soybean-oil meals had been subjected to the full degree of moist heat treatment during the processes of manufacture which would bring them to their maximum protein values. Hence, two commercial samples of soybean-oil meal—one containing 7 per cent and one, 22 per cent of oil—were autoclaved at 230°F for 30 minutes and fed to rats using the untreated oil meals as control samples. The two lots of rats receiving the reheated meals had gained an average of 50 and 57 per cent more body weight respectively at the end of five weeks than the two corresponding control lots (unpublished data).

Influence of Maturity and Variety

It will be noted in the chart that the two types of field soybeans used, the Illini and the Manchu, gave results very similar to each other throughout but that the so-called "edible" garden varieties picked while still green were superior to them, both raw and after cooking by boiling or autoclaving. One additional "edible" garden variety, available only as dried seed beans, did not show this superiority. No variety was available in both the green and the mature form. These results, therefore, did not demonstrate clearly whether the variety of beans or the degree of maturity was the essential factor responsible for the difference noted, although the evidence seemed to be in favor of the latter point of view.

Conclusions

The fundamental explanation of the beneficial action of moisture and heat on soybean protein has received detailed study at Wisconsin. Hayward, Steenbock, and Bohstedt concluded that "... heat caused some essential protein fraction, which was unavailable in the raw soybean, to become available for absorption and metabolic use." In a later study, by Johnson, Parsons, and Steenbock in 1939, it was shown by nitrogen and sulfur balances that the difference in the absorption of the raw and heated soybean proteins by rats was comparatively negligible and, hence, failed to furnish an adequate explanation of the difference in their nutritive values. Instead, the explanation appeared to lie in the relative unavailability, in metabolism, of some unknown S- and N-containing complex in the raw soybean, which although absorbed, tended to be excreted, probably unused, in the urine; heating the soybean made it available to the body.

Published Reports

Earlier reports of research on soybeans at the University of Wisconsin may be found in the following publications:

J. Nutrition **11** (1936), p. 219; **12** (1936), p. 275; **17,** Supplement (1939), p. 14; **18** (1939), p. 423; **21,** Supplement (1941), p. 21.

J. Home Econ. **32** (1940), p. 557.

Proc. Nineteenth Annual Meeting Am. Soybean Assocn., 1939, pp. 41, 51.

Annual Wisc. Expt. Sta. Rept.: Bull. 439 (1937), p. 21; Bull. 442 (1938), p. 36; Bull. 446 (1939), pp. 33, 54; Bull. 450 (1940), p. 18; Bull. 453 (1941), p. 31.

Status of Household Equipment

EARL C McCRACKEN

Dr. McCracken is in charge of the household engineering section of the home economics department at Teachers College, Columbia University, and is chairman of the AHEA's division of housing. He is also chairman of various American Standards Association sectional committees on standardization of household equipment.

IT is easy to say—but probably hard to prove to everyone's satisfaction—that the impact of war has fallen more heavily upon the manufacture of household equipment than upon that of any other type of civilian-used product.

It is both easy to say and easy to prove, however, that the raw materials of which the house, its durable furnishings, and most of its household equipment are made are the same raw materials used in the manufacture of products by which our armed forces live and will prosecute a successful war. When there is not a sufficient quantity of a raw material to allow manufacture both for essential military use and for civilian use, the amount designated for civilians is rightfully curtailed or completely cut off. The lists of restrictions of quantities of raw materials for use in the manufacture of certain products and of finished articles which may no longer be manufactured are evidences of the heavy hand laid on the manufacturers of household equipment.

These limiting and restricting orders are continually under study and in some instances are again in the process of revision; hence a definite, detailed, lasting picture of conditions cannot be given but, at least, the general picture as it is at this time can be outlined.

Electrical Appliances, Cutlery, Utensils

The manufacture of small electric appliances has been discontinued. This designation includes articles beginning alphabetically with biscuit bakers and proceeding methodically through bread toasters, bottle warmers, chafing dishes, egg cookers, flat irons, griddles, hot plates, ironers, and on to waffle irons. It is unlikely that any of the articles in the long list will be manufactured for the duration.

The manufacture of sewing machines has been specifically banned as has that of vacuum cleaners, heating pads, and electric fans.

The production of cutlery has been restricted to that for essential industrial and domestic use. Cutlery for use in food preparation can be produced using 60 per cent of the amount of metal used for the purpose in 1941. That made for serving and eating purposes has been restricted to 35 per cent of the 1941 usage. For nonessential cutlery only silver and gold can be used, and the amount of these metals available for this purpose is very limited.

The manufacture of utensils has been limited to certain articles in enamelware, cast iron and galvanized iron, or steel. The percentages of reductions in the amounts of the three metals involved vary with the metal and with the purpose for which the utensil is to be used. Production of portable lamps and shades is limited in quantity to 60 per cent of that in 1940.

Larger Equipment

Among the larger pieces of equipment, electric ranges, mechanical refrigerators, washing machines, and ironers are no longer being made for civilian use. The manufacture of ice refrigerators can be continued, but only six pounds of steel can be used per cabinet, and the sizes are limited to 50- and 75-pound capacities.

The order prohibiting new installations for bottled gas has effectively stopped the production of that type of gas stove. The general

picture in the gas, liquid-fuel, and combination-fuel stove situations is that manufacturers can use only 70 per cent of the metal used per unit during the base period from June 30, 1940, to July 1, 1941. Specifically, in addition, manufacturers can make only one type of gas range and the limit on metal use per stove is 100 pounds; liquid-fuel stoves with storage are limited to the use of 90 pounds of metal and those without storage facilities, to 45 pounds; combination-fuel stoves, to 350 pounds.

Water heaters and storage tanks can still be made, but the use of copper and copper alloys is prohibited except for controls and current-carrying parts. The capacities of storage tanks are limited to three sizes.

Cycle Cut

The effect of these limiting and restricting orders is that the continuous, general cycle from ground to processing plant to consumer to ground has, in the case of civilian household equipment, long since been cut. Soon all motion in that cycle will cease. Between the processing plant and the consumer were the wholesaler and the retailer. The cycle was broken at the processing plant by government order. In the absence of any restraining order on selling, the cycle, like any other natural event, is continuing through its remaining phases. When the wholesaler completely sells out his wares to retailers and when they in turn are completely sold out to consumers, the life and ultimate destination of the products is then entirely up to the consumer.

If It Is a Short War

The probability of resumption of the manufacture of household equipment for civilian use is to a large extent dependent upon the time and sequence of the occurrence of events about which only guesses can be made. The situation will be different if the end comes suddenly from that if a long-drawn-out, mopping-up action is carried out.

It might well be argued that, if the war is short, we ought to manufacture only things which will hasten the end and that for this short period we can rest on the cushion of the relatively few things already made but not as yet in the hands of the consumer and the things we now have in use. In this latter regard we are fortunate that the American manufacturer has produced for us articles of such high quality that the life expectancy is high enough to provide the cushion of supply for a considerable period.

If, however, the war is to be long, then the decision as to manufacture of civilian goods or of repair parts must be made carefully in the light of effects upon both consumer and manufacturer.

Loath to Make Civilian Goods

One of the results of the restricting and limiting orders has been the unwillingness of the larger manufacturers who can convert entirely to the war effort to produce any articles at all for civilian use. They had set a certain standard for the manufacture of their articles and have no desire to place their nameplates on products inferior to this higher standard, even though the consumer would know the article was a wartime product. John Q. Public would have a tendency in postwar times to veer away from buying articles made by a company whose wartime product did not perform so well or last so long as one made in prewar days.

Another factor entering into the situation is that the company's production manager has headaches enough in the company's wartime program without the added troubles of fighting to procure raw materials or parts which must of necessity bear lower priority rankings than do materials for war products.

Hence, if these companies make civilian-use products, it will be because they have been ordered to do so and not because they themselves ask to manufacture them.

Concentrated Production

If manufacture for civilian use is allowed or ordered, the number of any one product made would be very small in proportion to that in

normal times. It is estimated by the War Production Board that only 1½ per cent of the total steel expected to be produced in 1943 will go into consumer products, only about 7 per cent of the 1940 total of copper will be dedicated to civilian use and practically no high-grade aluminum.

No factory, therefore, could afford to make the limited quantity each would be allotted. It is more than probable that a concentration of production would be ordered. One firm would make refrigerators, another would make stoves, and so on. This concentration of production has been adopted as a policy by the War Production Board, and surveys are now nearing completion to determine which industries can best serve the nation if they are concentrated.

The question of loss of "goodwill" or publicity value is of serious consequence in this concentration problem. For example, if the manufacture of toasters were allowed, a company which had been making an excellent toaster should not have to see all the toasters being made under another firm's name. One solution would be calling all of these concentrated-production products "victory" models; another, trademarking certain percentages of total production with the names of manufacturers as determined by the percentage of manufacture during the last year of normal production.

Conservation and Repair

To prolong the life of existing pieces of equipment, education of the user of the equipment as to its most efficient handling, care, adjustment, and repair has been stressed. If replacement of a part or its repair is impossible, the women of the country may be faced with the alternative of dropping war work outside the home or lowering home standards. Fortunately, government agencies are considering the problems of repair and of parts-replacement. Some government quarters—but unfortunately not all—say that the consumer can feel fairly sure of getting repair parts for essential appliances.

Planning for Peacetime Manufacturing

In this period of nonmanufacture of civilian goods, the manufacturer has the problem of reconversion to civilian production on his mind. Staffs are being retained, in part at least, to give thought to new designs and new products, utilizing the materials and ideas developed during or because of the war effort. Now is the time for the homemaker and the home economist to pass on to the manufacturer their ideas as to new articles needed or as to desirable changes in construction or design of the equipment.

No one can foresee whether reconversion to civilian manufacture can begin unrestrictedly immediately upon cessation of hostilities. If it can, the conversion will be rapid, since each manufacturer will want to get his piece of equipment on the market at least as soon as his competitors.

Dies for the manufacture of equipment were not destroyed but have been put aside, biding the time of resetting in the production and assembly lines. This use of dies already on hand will be the quickest way to get goods again on the civilian market. As a result, the first civilian household equipment articles would be identical with or similar to the last ones made.

Changes should come rather rapidly thereafter, as designs and functions now being planned can be incorporated into the new production machinery. No matter how rapidly the conversion takes place, "alternate materials" which have proved to be superior to those used in prewar manufacturing can still be used. Intimations are that these alternate materials may often be the materials of choice when the civilian cycle is resumed.

The American manufacturer is now busily engaged in making the implements of war whereby our boys can assure for us the high standard of living to which we aspire, and when the time comes he will furnish us with the products that enable us actually to realize that standard of living.

How War Housing Is Programmed

COLEMAN WOODBURY

Onetime Rhodes scholar, Northwestern University professor, and Illinois houser, Mr. Woodbury is now the assistant administrator in charge of programming in the National Housing Agency.

TO stress the inseparable connection between maximum war production and adequate living accommodations for the workers who produce the machines and tools of war is to stress the obvious for readers who are concerned with the science and art of homemaking and the relation of the home to the community. Equally obvious is the fact that, in wartime, attention must be focused more on the science than on the art of providing war housing accommodations.

Limitations on Planning

War housing, like all other forms of economic activity, must be carried on within the framework of a war economy which is characterized by a scarcity of material resources, an overburdened transportation system, a manpower supply which must be stretched to meet military as well as production demands, and financial limitations set by Congress for that part of war housing which government alone can supply.

The result is that the war housing program has had to be whittled down to its bare essentials. War housing is now defined as the provision of the minimum housing facilities required to meet the needs of the indispensable minimum number of in-migrant war workers—that is, the war workers who must be brought into production centers to man the war production plants.

How these housing needs are being met through the program being planned and executed by the National Housing Agency will be described as it evolves through: (1) designation of "critical housing areas"; (2) calculation of the necessary number of in-migrant war workers requiring housing accommodations; (3) stimulation of maximum use of existing structures; and (4) programming of the minimum amount of new construction.

Locating Critical Areas

Obviously the war production effort has not hit all localities with equal force. The result has been housing problems of different degrees of intensity in different places, with attention focused on those areas where so acute a shortage of housing exists or impends that it threatens to impede war activity. These "critical areas"—sometimes a specific city or town, sometimes a group of cities or towns together with their surrounding territory—are the units for which war housing programs must be prepared. Thus, the war housing program of the National Housing Agency is in reality a series of programs for these critical localities.

For example, in one area primary reliance may be placed upon use of local labor supply with a consequent reduction in additional housing facilities required. In another area the same end may be achieved by readjustment of transportation facilities. In still another area the only possible answer to the problem may be the construction of new housing facilities. More frequently the solution of the housing problem in a given locality is a mixture of all these ingredients, so proportioned as to cause the minimum drain upon all scarce resources.

Determining the Need

The next step, which is primarily the responsibility of the War Manpower Commission, is determination of the number of war workers who are likely to come into a production area within a given period. This involves, first of all, a thorough analysis of the

local labor supply and a plan for its maximum utilization, because presumably these workers already have housing. After the maximum contribution from this source has been calculated, it is possible to determine the approximate number of workers who must be brought in from beyond the locality and for whom housing accommodations must be provided.

Also essential to the programming of war housing is the best possible estimate that can be made as to the proportion of these necessary in-migrant workers who will come into production centers as single persons and the proportion who will bring their families with them. These estimates are also the responsibility of the War Manpower Commission.

The individual in-migrant will be taken care of as far as possible in existing housing, with most of the balance being provided for in new government-built dormitories. Existing rooms and light-housekeeping quarters will be expected to house the two-person families as far as possible. Beyond the capacity of these two sources to house families in this group, provision will be made in new government-built war-apartments.

For the larger families, again existing housing will be used to capacity, as well as privately built housing where it is available. For the remainder, the government will have to provide new family accommodations. In summary it may be said that the roles of new and existing structures in the total war housing program are almost equal, with a slightly larger proportion of total accommodations to be provided by new construction.

The Homes Use Service

This heavy reliance upon existing structures to absorb nearly one-half of the total war housing need is, of course, the result of the materials situation, and it has led to the establishment of the Homes Use Service in the Office of the National Housing Administrator. This Service has two major responsibilities. One is to promote the fullest use of existing dwelling space "as is." This means intensifying the drive to induce homeowners as well as renters to take in "war guests" for the duration. This function is performed through Homes Registration Offices or War Housing Centers in war production areas, which serve as clearinghouses where people who have extra living space may list it for occupancy and where war workers may apply for use of that space.

The other responsibility of the Homes Use Service is to encourage the conversion of existing structures into the maximum amount of dwelling space feasible. This conversion may be done by private individuals, who may obtain an insured mortgage loan for the purpose if they meet Federal Housing Administration standards. Or it may be done with government funds, if the properties offered for conversion are suitable for remodeling into additional living units speedily and with a minimum use of critical materials, and if they are located within reasonable transportation distance of war plants.

Three Aspects of Planning

After the number of in-migrant war workers has been reduced to the lowest possible figure by full employment of local labor and after maximum use has been made of existing housing facilities, planning for the necessary minimum of new housing construction has three aspects: the proportion of new building to be done with private and with public funds; the types of accommodations to be built; and —most important of all—the necessity to conserve critical materials.

One of the fundamental policies of the National Housing Agency is to give to the private building industry the opportunity to do as much of the war housing job as it can. Private enterprise, however, will confine its activities almost exclusively to the provision of permanent housing of the family-unit type. Under most circumstances, temporary housing offers private capital no opportunity to get its money out, much less to earn a fair return on its investment. Nor can private

builders, in most cases, meet the cost requirements necessary to achieve rentals within the financial reach of the lowest income war workers. Barring these limitations, private enterprise is encouraged to make a major contribution to the war housing program.

For the balance of the requisite new construction it is necessary to resort to public financing, and the accommodations thus provided fall largely into three categories: dormitories, war-apartments, and temporary shelter. New construction for single and two-person-family war workers will be of the dormitory and war-apartment type. The balance of the accommodations to be built with public funds are programmed as family units and almost all of them are to be of temporary construction.

Permanent, publicly built and financed family accommodations which are now under way were started before the swing-over to temporary construction and are being built only in areas which have evidenced a probable postwar need for them or in which the only available sites were ones where temporary structures would create either fire or health hazards.

The net result of this new construction for the year 1942 was a total of 278,000 additional war housing units of all types, completed under preference ratings with public and private funds. This sum included 150,000 family units of private war housing and 128,000 units of public war housing. An additional volume of private housing serving war needs was completed in the early months of the year without priorities assistance.

Under construction at the start of 1943 were some 80,000 private family units and 214,000 units of public war housing. A total of 170,000 family units remained to be started by private builders during 1943 under the national priorities quota of 400,000 privately financed war housing units. Out of funds presently available for public war housing, it is estimated that 170,000 additional units will be started in the first six months of 1943. Of this total, 146,000 units are already in preconstruction stages of development.

With respect to the types of accommodations provided, it has already been pointed out that private enterprise supplies only family units. Public housing accommodations, including those which have been completed, are under construction, or are in the preconstruction stages, are distributed as follows: 323,000 family units, 36,000 war-apartments, 107,000 dormitory units, and 22,000 trailer homes. Thus, although the accommodations may be largely of temporary construction, still they have been predominantly of the family-unit type—in the ratio almost of two to one.

The designs in all categories of war housing have been and are being adjusted to meet shortages of materials, labor, transportation, and utilities. Use of critical materials will be held at a minimum and substitutes are being developed and used wherever possible. In diligently pursuing the policy of conserving materials, the National Housing Agency has developed for its public housing program a type of permanent family dwelling which requires only 28 per cent as much critical material as did the average prewar permanent family unit. Temporary family units and dormitory and war-apartment accommodations achieve even greater reductions in the demand on scarce materials.

NHA Goal

Since its establishment in 1942, the National Housing Agency has had but one goal—the gearing of housing to the war effort. Every possible precaution is being taken to reduce waste and otherwise ease the transition from a wartime to a peacetime economy. As progress is made toward completion of the bulk of war housing requirements, attention will be turned to study of the disposition of this housing and to planning how to translate the technological gains and the gains from cooperative effort, as well as other wartime lessons, into a constructive program for better urban housing in the postwar period.

Training for War Housing Management

JEAN COMAN

Miss Coman is chief of the Office of Housing Management Training in the Federal Public Housing Authority. She has a master's degree in social science from Western Reserve University and has been in various housing activities since March 1935.

THE management of wartime public housing projects is no less large, no less complex, than is the construction of the buildings. There are some 10,000 management employees in operating projects today. When the program now authorized is completed there will be more than 30,000.

It is obvious that 30,000 persons trained in housing management practices and procedures would be difficult to assemble even in ordinary times. Now, with the demands of the armed services on the one hand and of other war activities on the other, it is well-nigh impossible to obtain experienced management personnel.

Complexity of the Problem

The management of wartime housing is apt to be more complex than the management of the public low-rent housing projects which were constructed before the war. Larger projects, different types of structures, and additional services required have all contributed to the increased scope of management jobs.

Some of the new projects are, in effect, cities within themselves. In the Hampton Roads area of Virginia, for instance, there are projects with 4,000- or 5,000-family dwellings. In terms of population this means that these projects house 15,000 or 17,500 people. There are even larger projects in some of the western states.

The management of projects of such size naturally will require knowledge not only of ordinary good management practices and community operation but also knowledge of many of the factors involved in city management.

New types of structures have also contributed to the increased scope of present-day public housing management. Dormitories had an increasingly important place in the government's war housing program throughout 1942. They have to be furnished. They have to be kept clean, and linen service has to be supplied. Since dormitory rooms provide little more than a place for sleep, space and facilities for relaxation must be provided. Provision must be made also for medical care and infirmaries.

The sites of war housing projects must be near the shipyards and factories whose workers they house. This frequently means that the projects are not located near adequate sources of good, wholesome meals. Therefore food service is often a part of a housing project.

Management Training Set Up

To meet the need for trained workers in the field of management, the Federal Public Housing Authority, which is one of three units under the National Housing Agency, established within its management branch last July an Office of Housing Management Training to organize and co-ordinate training programs for management personnel.

The work of the FPHA is now fully decentralized into ten regions with offices in Boston, New York, Washington, Atlanta, Cleveland, Chicago, Kansas City, Fort Worth, Seattle, and San Francisco. Each of these offices has a management training adviser, who works with the local housing authorities and the federally operated projects. The Office of Housing Management Training in Washington develops policies for and gives advice on the training work in the field.

While the Office of Housing Management Training cannot legally spend funds to train persons not in the service of the government, it nevertheless can and does sponsor in-service training in the field of management. With so large a job to do and limited personnel with which to do it, of necessity the first and greatest emphasis has to be on training people to train others—in other words, to show managers of local projects how they can most efficiently train the janitors, the maintenance men, the housekeepers, and others who are to work under them.

Although this type of in-service training was begun only last September, already more than 32 groups of management supervisors, totaling about 382 persons, have participated in the job-instructor training program. New Haven, Connecticut, was the first local housing authority in New England to conduct such a program; Los Angeles was the first on the west coast; Seattle, Portland, Vancouver, Hartford, and Milwaukee have also had such courses.

Job-instructor training is conducted in five two-hour sessions designed to teach a supervisor the best method of teaching an employee a job he does not know how to perform.

As the scope of public housing has widened, it has become, naturally, of increasing interest to home economists. The particular and special knowledge of this profession is needed in housing to a greater degree than ever before.

Home economics work has probably advanced further in Texas housing projects than in those of other states. In Brownsville, the local housing authority added to its salaried staff a home economist who initiated and carried out a food conservation and canning program. In Corpus Christi, the city home economist supervises the local housing program. In Orange, two homemaking teachers in the public schools work with tenants of a project. In Beaumont, families have the help of a home economist whose salary is paid in part by the project, in part from the state vocational education funds.

In some other states also there has been a considerable amount of home economics work with tenants of local housing authorities. But many challenging opportunities for home economics work still remain completely untouched.

The trailer camps, the one-room "victory apartments," the 50-family and the 4,000-family projects each present their own unique problems in home management and in child care and training. The dormitories set up for men separated from their families pose yet another large-scale home economics job: of making life there comfortable and happy enough that the men will stay at their wartime posts.

Some home economists have the combination of training and personality traits to do an excellent piece of work in tenant selection. Others could serve as managers or assistant managers of project residences, of dormitories, and of war apartments. Still others could work as nutritionists in food-service programs; they could conduct classes for the wives of the workers or for cafeteria and restaurant personnel.

Home economists can find out at firsthand what the conditions are in the projects near them and, where there is a need—as, for instance, for a day nursery or a decent place to eat—they can help mobilize civic action to meet that need.

The wartime housing program is one which should have great appeal to the home economist, both as a professional person and as a patriotic citizen eager to bend every energy toward the speedy conclusion of a successful war.

Quiz on Stockings

A 10-minute quiz on rayon stockings, good for class use, is part of the 12-page March number of *Consumer Education Service*, published by AHEA. Among other subjects discussed are food problems, price and food control in England, OPA's work in simplification and grading. Price, 30 cents.

Home Dehydration of Chili

EDITH M. LANTZ

Miss Lantz has been research specialist in home economics at the New Mexico Experiment Station since 1935; her bachelor's and master's degrees are from the University of California.

SINCE the outbreak of the war, there has been a great deal of interest in both home and commercial dehydration of foods. Federal restrictions on the use of tin for containers for certain foods and the necessity for packing much food in a small space for shipment abroad have given great impetus to commercial dehydration of foods. And a shortage of pressure cookers, which are essential for safe canning of nonacid foods, as well as a shortage of containers, has led the housewife to consider the drying of fruits and vegetables at home. Recent research on the changes that take place in foods upon drying has made it possible to prepare foods of better appearance, flavor, and nutritive value than those produced a few years ago.

Disadvantages of Sun-Drying

The drying of food by artificial heat has several advantages over sun-drying. It is more quickly done; it is less difficult to keep the food clean; and the finished product has a better color and usually retains more of the vitamins of the fresh food. Moreover, steaming or precooking the food before drying by artificial heat destroys the enzymes which in sun-drying continue their work of causing oxidative changes in the food.

During the last year, experiments in the home dehydration of green chili were carried on at the New Mexico Agricultural Experiment Station as part of a study of the effect of canning and drying on the carotene and ascorbic acid content of chili.

The Dehydrator

A small homemade dehydrator was made in which dried green chili of excellent quality was prepared. This dehydrator was easily built of scrap material and could be used for many types of fruits and vegetables. The cost of the dehydrator was $4.65. Of this amount, $2 was paid to the boy who built the dehydrator, and the remainder was spent for nails, hinges, lath, and small items which are found in the average tool chest.

Directions prepared by the State Agricultural Extension Service served as a general guide, but the dimensions of the dehydrator were determined by the size of the wooden packing box from which it was made. This box, with the bottom removed and one side hinged to form a door, made a cabinet 32 inches high, 18 inches wide, and 17½ inches deep (outside measurements), which stood on legs 12 inches high. Six 12 x 16-inch lath and hardware-wire-cloth trays made removable shelves.

These shelves are smaller than the inside of the cabinet, and in use the first, third, and fifth shelves are pushed to the back of the cabinet while the others are brought to the front to allow maximum circulation of air over each shelf. A piece of sheet iron suspended over the burner beneath the cabinet acts as a heat spreader, and a screened opening in the top of the cabinet permits escape of the moisture-laden, heated air. An ordinary Bunsen burner furnished the heat in these experiments, but a kerosene heater could have been used.

Preparing the Chili

Though some unpeeled green chili was dried, the peeled chili was used for most of the experiments, since it is much more satisfactory. Peeling the chili, however, is a tedious (and sometimes even painful) process, and several methods of loosening the tough skin were

tried. Pouring boiling water over the pods is not effective. The common practice of blistering the pods on top of a stove, followed by 10 minutes of steaming in a colander over boiling water, was used in some of the experiments. The chief purpose of the steaming was to destroy the oxidative enzymes which cause loss of color and vitamins, but it served also incidentally to loosen the skins still further. The easiest way to remove the skins and the one which yielded the most attractive product was to dip the pods in hot oil (350° to 400°F) until the skins blistered. The high temperature of the oil heated the pods through very quickly and made steaming unnecessary. Either cooking oil or a tasteless, odorless mineral oil was satisfactory. After the skins and the seeds had been removed the prepared chili was spread on the cheesecloth-covered trays for drying.

Drying the Peppers

To compare the chili dehydrated by artificial heat with the sun-dried, the peeled and seeded green peppers were divided into two lots. One lot was dried in the dehydrator and the other in the sun. The trays were placed in the sun and moved frequently so that they had a maximum amount of sunshine, and they were supported at an angle to

Comparison of the carotene and ascorbic acid values of green chili in the fresh state and after artificial dehydration and sun-drying

DESCRIPTION OF THE CHILI (LOTS WERE PICKED AT DIFFERENT TIMES)	CAROTENE		ASCORBIC ACID	
	Actual Value	Calculated Value in Terms of Fresh Product*	Actual Value	Calculated Value in Terms of Fresh Product*
	micrograms per gram	*micrograms per gram*	*micrograms per gram*	*micrograms per gram*
Lot I				
Fresh	—		—	
Dehydrator-dried (peeled)	20.3	1.7	8.1	0.68
Sun-dried (peeled)	8.8	0.7	3.0	0.25
Dehydrator-dried (unpeeled)	22.8	1.9	3.5	0.29
Sun-dried (unpeeled)	3.9	0.3	0.9	0.08
Lot II				
Fresh	—		—	
Dehydrator-dried	31.0	2.6	12.5	1.04
Sun-dried	5.0	0.4	0.9	0.08
Lot III				
Fresh	2.4†		2.35†	
Dehydrator-dried	23.0	1.9	10.4	0.87
Sun-dried	5.3	0.4	1.4	0.12
Lot IV				
Fresh	—		—	
Dehydrator-dried	34.6	2.9	16.6	1.4
Lot V				
Fresh	4.3‡		2.4‡	
Dehydrator-dried	22.3	1.1	12.6	1.0

* One gram of dried chili is equivalent to 12 grams of fresh.

† Actual carotene and ascorbic acid values were determined only once for Lots I, II, and III, which were blistered and then steamed.

‡ Actual carotene and ascorbic acid values were determined only once for Lots IV and V, which were oil-dipped.

permit free circulation of air. The temperature of the air above them varied, of course, and ranged from 85° to 125°F.

The second lot was dried in the dehydrator. A temperature of 130° to 135°F appears to be best for most of the drying process. The temperature may go as high as 160°F for a short time if there is a good circulation of air, but if continued too long it causes a scorched odor and taste in the reconstituted chili, even though the dried product does not appear scorched.

Results

In every case the dehydrator chili was of better color and texture than the sun-dried. The difference in the appearance of the two lots was even more marked when the dried material was reconstituted for use by soaking in water. The dehydrator chili freshened more quickly than the sun-dried; the color and texture resembled that of the freshly peeled pepper while the sun-dried was brownish in color and quite tough and rubbery. Chili prepared by dipping in hot oil was superior to that prepared by other methods.

As both green and red (ripe) chili are rich in carotene and ascorbic acid and are important sources of these in certain areas of the Southwest, it is desirable to retain as much as possible of the nutritive value of chili prepared for winter use.

Carotene and ascorbic acid determinations were made on both the sun-dried and dehydrated chili. In every case the dehydrator-dried chili contained from three to six times as much carotene as the sun-dried, and the difference in the retention of ascorbic acid was even greater. In no case, however, was the retention of these vitamins as high as in carefully prepared home-canned chili.

The carotene and ascorbic acid values of some of the samples of sun-dried and dehydrator green chili are given in the table.

Regulations That Lower the Milk Supply

Four types of regulation are substantially hindering the production and distribution of milk and cream at the present time: license requirements . . . ; unreasonably rigid standards of dairy construction and equipment. . . [which] are extremely costly to comply with and add nothing to the health or welfare of consumers; restrictions [caused by standards which bar milk of less than A Grade] . . . despite the fact that such grades are good, safe, and less expensive; [and restrictions of] some jurisdictions [which] go so far as to prohibit the sale of milk or milk products unless requirements of those localities were adhered to. . . .

Several States and cities require a license to be taken out by all out-of-state milk producers, milk processors, pasteurization plants and dairy product plants before their products can be sold in those cities and States. It makes no difference whether such farms and plants have already been licensed in the State or city in which they are located.

Before these licenses are granted, many States and cities require the applicant's farm or plant to be inspected by inspectors sent out by these States and cities. Again, it makes no difference whether an inspection has already been made. . . .

Plants not in the State or city . . . are often required to pay a fee for each inspection. The inspection fees of a single jurisdiction into which a plant desires to ship milk and cream run sometimes to several thousand dollars a year.—*Trade Barriers in the Food Industry*, Bureau of Foreign and Domestic Commerce, Department of Commerce, 1943.

In Short . . .

ASA's Annual Meeting

DOROTHY HOUGHTON
Teachers College
Columbia University

The annual meeting of the American Standards Association was held in New York City on December 11, 1942. R. E. Zimmerman, the re-elected president, reported on the work of the Association during 1942.

Seventy-three American standards were adopted, 49 revised, and many others directly connected with the war effort are being worked out. Ten of these American standards have been requested by such government agencies as the War Production Board and the Office of Price Administration. Mr. Zimmerman emphasized that much of this work will be of permanent value in the postwar period.

Joseph L. Weiner, director of the Office of Civilian Supply of the War Production Board, was the speaker and discussed concentration in the manufacture of civilian supplies. He and others reported that during 1943 there will be available for civilian use no high-grade aluminum, only 1½ per cent of the steel manufactured, and only 7 per cent of the copper used in 1940. Consequently, it will not be possible to allocate the raw materials available for essential civilian goods by sharing them within the industries according to past business, as the amount would be too small to keep them all going.

Mr. Weiner described the concentration within the stove industry as the first experience of WPB in this direction. According to the order issued last May, neither large nor small firms in places where labor is scarce are permitted to manufacture cooking and heating stoves. Production is restricted to small plants in areas of "easy" labor.

According to Mr. Weiner, this policy of concentration has been adopted by WPB not only to increase our war potential but also to "guarantee what people must have at prices they can afford to pay."

EDITOR'S NOTE: Miss Houghton is AHEA's member on the Council of the ASA.

NRDGA Conference

HAZEL B. STRAHAN
Michigan State College

One could not have attended the wartime conference of the National Retail Dry Goods Association held in New York City early in January without realizing keenly that civilian production and distribution at the consumer level are now feeling the full impact of the war. Though the conference was primarily a clearinghouse for discussion of retailing problems, it had important implications for consumers and provided a professional outlook for students who plan to go into retailing. Manpower shortage, inventory limitations as they affect the more equitable distribution of goods, present and proposed price regulations, and store-service limitations were discussed.

Federal Officials Report

Joseph L. Weiner, director of the Office of Civilian Supply, in his talk on "Organization of the Civilian Economy to War Needs" stressed the point that "last year in curtailing the production of civilian goods, our chief interest was in reducing the consumption of critical materials needed by our war program. This year we will be forced to direct our attention to another shortage—manpower. We are going to give up things and services not for lack of materials but for lack of labor . . . .

"In making available supplies go as far as possible, consumer goods must be stripped to their essentials so that none of the material that goes into a particular article is wasted."

Dexter M. Keezer, deputy administrator of

the Office of Price Administration, told of his recent visit to England and of rationing and price control there. He pointed out that rationing there was used not only to distribute very scarce commodities fairly but also to make civilian supplies as scarce as they can safely be made in order to release every resource possible for direct war use.

Results are that the British population as a whole is better nourished than it has ever been, and that because of the utility clothing program those in the lower income brackets are better dressed. The Board of Trade prescribes the kinds of cloth and utility clothing to be produced and minimum specifications for them. It fixes maximum prices to be charged at every stage of manufacture and distribution. As utility clothes have neither the 66⅔ per cent luxury tax nor the 33⅓ per cent tax on ordinary clothing, some of it is sold at not much more than half of what clothing of comparable quality once cost.

Dr. Kenneth Galbraith, deputy administrator of the Office of Price Administration, in his talk on "The Hard Facts about Price Control" showed that OPA's price controls were the best possible under the emergency conditions. Information now available will make possible greater effectiveness and fairness in the months to come.

In speaking on "The Availability of Consumer Merchandise in 1943," E. H. Scull, formerly chief of the clothing section of WPB, pointed out that shortages will surely be worse before they are better.

Trend to Customer Self-Service

That the reduction in personnel in the retail store has been acute was evidenced in a panel discussion by leading personnel directors from all parts of the country. Increased use of older men and women, of Negroes in non-selling jobs, of part-time selling by high school students, and of women in positions formerly open only to men was reported. A trend likely to develop is "self-selection" of textile goods by customers.

Actually, many of the problems of the customer and the retailer are similar. The over-all view of these mutual problems clarified our obligations and contributions as home economists in the more critical months which lie ahead.

Design for Browsing

ANNE GRANT
University of New Hampshire

It's a long, low room in the west wing of the University of New Hampshire library. Designed with an eye for color and a feeling for comfort, it is not the walnut-paneled affair that a college usually labels "reading room," but a room that just begs for the students to come, pick up a book, and relax.

Behind the creation of this part of the library is a belief that the availability of good books in pleasant surroundings would be helpful in giving the students a better appreciation of reading as entertainment. The idea was President Engelhardt's, and at his suggestion Ann Beggs, specialist in home management for the University's Extension Service, planned a place where the undergraduates would come, not because they had to read an assigned book, but because they wanted to read. The result speaks most eloquently for itself.

The Setting

The first impression of the room is of light and color. Eight wide windows let in the sun all day long; and if it's dark, indirect lighting fixtures and floor and table lamps keep the room efficiently lighted.

With a cheerful atmosphere in mind, Miss Beggs used the primary color scheme—red, yellow, and blue. The window draperies in these colors are of a heavy novelty weave with alternating plain-colored stripes and figured design. They hang at the sides of the windows, leaving the full width free for letting in the light.

The walls—a soft yellow—reflect the light and add to the impression of continual sunshine. Lining two walls are bookshelves and,

scattered around the room, incidental maple shelves and tables hold special collections or special editions of good books. Around the room, also, are ferns from the University's horticultural department and camera studies from the student camera club.

Furnished for Comfort

Recognizing the student tendency to sit with feet in the chair or one leg over the arm, Miss Beggs chose for the room the most comfortable leather lounge chairs and sofas on the market, in red, blue, and yellow. Then she bought eighteen Indian cushions to help solve the feet-on-the-furniture problem. Arranged originally in stall effects, chairs and cushions are appropriated by each incoming group of students, who maintain no fixed arrangement. Usually there are several chairs in a group, with two or three pairs of student feet amicably sharing a cushion as their owners relax and read.

The aim of Lillie Kleven, who was appointed reader's adviser, was to have some of the classics in interesting or unusual editions, new books, and popular books—all out in plain sight where the student who just came in and browsed around could find something for any mood.

And It Works

The success of this room can be attested to by dry statistics. Seventy-five to one hundred students use the room during the day. The total circulation for one six-month period was more than two thousand books.

There is often an attendant and adviser at the desk, but sometimes the place is not under supervision. If a student finds himself in the middle of a chapter and with two minutes to make class, he can sign for the book himself without having to take it up to the main desk. Even without supervision, this reading room is usually quieter than the rare-book section of the Congressional Library.

President Engelhardt has every right to be proud of his brain child and of Miss Beggs' and Miss Kleven's interpretation of it.

Idaho's Dried Onions

GOLDIE MANNING
NYA Regional Resident Project
Weiser, Idaho

In the fall of 1941 a new $50,000 industry was opening in Idaho for dehydrating the onion. Processing the onion for drying includes peeling, washing, shredding in layers, and putting the shreds on large tray racks to be dried by blown heat. The shreds are sorted for quality, and rough pieces and shavings are then ground into powder form.

Most of the products at present are sold to large commercial food firms, the Army, and the Navy, but they also have a promising future in household cookery, particularly in families who do not grow their own onions or who live in small apartments where storage is a problem. These dried products also make excellent additions to the emergency shelf. The dehydrated products, of course, are more expensive than are onions grown in one's own garden.

Experiments show that the dehydrated onion shred and powder can be successfully substituted for fresh onions in many types of recipes. Six level tablespoons of the shred or 1½ to 2 tablespoons of the powder are the equivalent of one medium-sized onion, though of course some cooks will prefer to use more, some less.

Some of the tastiest results were fried onion shreds with bacon, glazed and sautéed onion, onion soups and stuffings, onion shortcake, Dutch stew, and the ever-delicious French fries. If the cooking time of a product is less than 20 minutes, the shreds may require soaking for about half an hour in cold water before cooking. The onion shreds can be substituted for fresh onions in almost every dish except a green salad.

The powder can be sprinkled on dry foods or mixed into a paste and added to liquids. The onion flavor can be brought into a salad by stirring a bit of the powder into the dressing. If a cooked dressing is to be used, the powder should be cooked in the dressing.

Who Represents Consumers?

EDNA VAN HORN
Executive Secretary
American Home Economics Association

While getting some fresh air by walking back from a long consumer conference in February, I decided that it was about time to try to get down in black and white the answer to that question. All of us at AHEA headquarters go to many gatherings of *consumer* organizations in the course of a year. We're always surprised at the variety of organizations that meet by invitation or inclination to represent, as they say, "a large proportion of consumers," or merely "consumers." At these meetings, invariably my eye comes to rest upon someone who prompts the unspoken question, "I wonder why you think your organization represents the consumer point of view?" At the same time, I'm sure that others are wondering why AHEA, a comparatively small organization, thinks it can speak for consumers.

Many of us go to these meetings a bit on the defensive. We show this by being overeager to rise up and tell why we represent the consumer, for how many consumers we speak, or what we are doing about consumers' problems.

One Among Many

At a first meeting of a group, representatives are usually invited to explain their consumer interests. Members of AHEA find it easy to explain that "The AHEA is not a consumer organization; rather it is an organization of professional men (No one asks how many!) and women who are interested in consumer problems for two reasons: (1) The Association's objective, as stated in its constitution, is to develop and promote 'standards of home and family life that will best further individual and social welfare'; and (2) An important area of study and practice in home economics concerns consumption problems."

Other organizations, too, have important consumer interests. Women's organizations emphasize study groups or the fact that it is women who bear the brunt of family consumer problems. Labor unions and their auxiliaries speak for the families of organized workers; co-operatives, for consumers who have banded together to produce "for use, not for profit"; testing and rating agencies, for the buyers of consumer services. There are spokesmen for minority groups set apart by racial or cultural differences; for business groups who are on the consumer side because giving customers facts will check chiseling competitors.

Home-Use "Know How" Needed

To the extent that wartime problems can be met by democratic methods, adequate representation of all points of view is essential. The immensity of the war calls for mobilizing all our national resources of manpower, materials, skills, and knowledge. This combination of skills and knowledge in a given job has been dubbed "know-how" by industry and government officials.

Not only must this "know-how" be used on the job of producing, fighting, and living, but it must also be represented in the planning that makes the job effective. When it comes to wartime civilian essentials, an important part of the "know-how" is in the "home-use" experience and point of view. Granted that the way goods and services are chosen in the market is important to the war—as are also the way they are gotten home, cared for, stored, apportioned, processed, and used in the home —it then becomes important to have the "know-how" of that job of home use represented in economic policy-making.

The Home Economics Point of View

It has always been the belief of the AHEA that it was the *job of consuming* rather than the *class of consumers* that should be represented at the policy level of planning, administering, or regulating. We have not always made it clear that it is the ability to present and interpret the "know-how" about the practice of consuming which makes a person a good consumer representative; or that it is because AHEA and the profession of

home economics exist to develop and interpret knowledge and skill in the job of using resources (in consuming) by families and individuals that representatives of our profession are qualified to represent the "home-use" aspects of our economy. It does not follow that AHEA proposes to represent the job of consuming wherever an advisory agent is needed for this purpose; neither does it follow that being a home economist makes one automatically a consumer representative.

That job is too big to be tackled by AHEA with its comparatively small membership and budget. It is the aim of the Association in time to broaden its membership and its effective work so that it can do an adequate job of firsthand contact with homes at all economic and social levels so that it can improve two-way exchange of information and experience to determine what the home-front problems are and to direct efforts to solve them. That goal will not be reached soon enough to help win the war although war demands stimulate greater efforts toward it.

No other organization is now in a position to represent the job of consuming in its home aspects. Those who meet frequently in consumer conferences are recognizing this fact. Some have tried to get around it by urging the use of large advisory groups, assuming that everyone is both a producer and a consumer with other cultural interests as well; that by getting a balanced group of producer and cultural interests, you get a representative consumer point of view. There are several dangers in selecting consumer representation by this method. First, some producer and cultural interests have a disproportionate influence because of their aggressiveness, ability, and resources for representing their particular interest. Strictly business and management groups, even though they too are consumers, are often excluded as being too powerful to be checked and balanced in the average "consumer" group; some consumer groups exclude labor organizations as well on this basis; others, farm groups and so on.

Second, it takes rare objectivity to maintain a consumer-use point of view while defending the class interests of consumers such as farmers, workers, women, Negroes, buyers. Third, the emphasis in such groups is more apt to be protecting the rights of consumers rather than contributing knowledge of the job of consuming.

Such groups are far from satisfactory even to participants. They certainly are not effective in serving the administration or management that wants to know what "people" need and what they are thinking. Any representative of the consumer will be welcomed in many high places if he can show that he is not just another interest but brings information about a vital job within our economy—that he holds a vital part of the puzzle, without which no amount of genius can put the picture together.

Our Specifications

It is appropriate now for me to think of the qualifications of home economists for filling the job of consumer representative. I'm sure that our Association would want to develop the specification details by working with other groups concerned with the problem of consumer representation. These general qualifications, however, would seem to be basic:

Let there be no barriers because of sex, race, or religious convictions. Next, add the usual requirements as to character and capacity for working with others. Under special qualifications, write knowledge and successful practice of the sciences and arts of the consuming function and ability to analyze and interpret the function at different economic and social levels and under varying conditions. And, above all else, insist upon recognition of responsibility for representing not an interest or class but a function.

Not every home economist, of course, meets the specifications. Much in her professional training, however, would help her fill the job. It is also true that there would be able candidates without a home economics degree who would meet the specifications.

Comment . . .

Convention Canceled

"Time is a sort of river of passing events, and strong is its current; no sooner is a thing brought to sight than it is swept by and another takes its place, and this too will be swept away."

So wrote Marcus Aurelius back in the second century A.D.

Change is a rule of nature which wartime serves to accelerate. It should occasion little surprise, therefore, that in the February JOURNAL we should announce a work-conference for all comers in St. Louis, June 18 to 21—then in the "Washington News" of the March issue say that the meeting would "probably be a session for state leaders only" and now in the April number report further changes.

The ever-tightening restrictions on travel—both for home economists and for the government officials we would want to bring to a conference—have brought a complete overhauling of original plans. Jessie Harris, president of the AHEA, came to Washington, D. C., March 9, and reported that the executive board had voted to cancel the annual convention and to express its appreciation of the good work of the Missouri members who had been preparing for the meeting.

The board also voted to authorize the holding of a small delegate session—an Institute on the Home and the War—so planned as to co-operate fully with government requests as to travel and at the same time enable the Association to equip itself to handle the wartime needs of the home.

AHEA's Victory Van

On March 1 the AHEA had 12,048 members. For 1942–43 the number needed to balance this year's budget of the Association, shorn of income from convention exhibits, is 17,878. If each state association increases members 20 per cent we can reach our goal.

Reorganized Bureau

Time's strong current has also swept into view a new home economics setup in the federal government. What was organized in the U. S. Department of Agriculture back in 1923 as the Bureau of Home Economics has now become the Bureau of Human Nutrition and Home Economics. The new Bureau set up by Secretary Wickard on February 21 consolidates the old Bureau of Home Economics with the Division of Protein and Nutrition Research of the Bureau of Agricultural Chemistry and Engineering.

"This change of name should announce to the world our conviction that human nutrition and home economics are one and indivisible," declared Dr. Eugene C. Auchter, head of the Agricultural Research Administration, under whom the new Bureau will function. "Furthermore the new name gives due recognition to the vital importance of nutrition in a national crisis. Yet it need arouse no fears as to the fate of other phases of home economics work in USDA planning. We propose to expand, not contract, the work of the other home economics divisions—family economics, textiles and clothing, and equipment. Their importance has also been increased by the wartime emergency."

New Personnel

Dr. Louise Stanley, who has served as chief of the Bureau of Home Economics since its beginning, has been drafted by Dr. Auchter to serve as special assistant in charge of food problems related to foreign countries, in the Agricultural Research Administration, which was set up last year to knit more closely the research work of the various bureaus.

As the war progresses there is increased need for someone to confer with representatives of other nations about their food problems. Because of Dr. Stanley's rich background, she was the one asked to head up this work and she accepted because she felt

that there she could render the greatest service to the nation both now and in the reconstruction years after the war. It is a field which has rich potentialities—one which may well call for the talents of other home economists as it develops.

Dr. Henry C. Sherman, internationally known for his research in nutrition, will serve as chief of the new Bureau of Human Nutrition and Home Economics. He was a charter member of the American Home Economics Association and in July 1929 was made an honorary life member of the Association. It is therefore a statement of the obvious to say that he is well informed on and sympathetic with home economics in general. He enjoys great prestige among home economists and among all other groups in the nation—Congress included.

The AHEA and the Bureau

The development of home economics work under his leadership will be watched with deep interest by the American Home Economics Association, which had an important part in setting up the Bureau of Home Economics back in 1923 and in its development through the years. In June of 1923 Secretary of Agriculture Henry C. Wallace brought together in Washington, D. C., seven home economics leaders to get their advice as to such a Bureau. These leaders were Mrs. Mary Hinman Abel, Mary Sweeny, Helen Thompson, Ruby Green Smith, Ruth Wardall, Edna White, and Louise Stanley—who was soon to become its first chief.

This new Bureau of Home Economics took the place of the Office of Home Economics set up in 1915 with Dr. Charles F. Langworthy as chief. Dr. Langworthy, by the way, was also a charter member of the AHEA and its vice-president from 1909 to 1921.

With the installation of Dr. Sherman as chief of the Bureau of Human Nutrition and Home Economics, home economics work in the federal government enters upon a new phase of activity—one which we hope will enrich and broaden the home economics field.

Noblesse Oblige

Point rationing of processed fruits and vegetables which began March 1 ushered in a new phase of wartime living. In spite of warnings last December that our civilian food supply in 1943 would be only about half as large as what we have been getting in the last few years, the high point valuation of the different foods came as a shock to most people. Still more disturbing to the home economist was announcement that dried beans and peas, upon which she had counted to supplement meats, were also to be rationed and that there would be two pounds less of these meat alternates per person in 1943 than in 1942.

Interpreting, Advising

As supplies become tighter the home economist's role of interpreter and adviser becomes increasingly important. She can assure people that their basic needs—though not their desires—will be met. Even while she reassures them she can and should present frankly the stringency of the situation.

She can show them the wisdom of prompt adjustment to the new order since it is here to stay for a considerable period. After the armistice our armies of occupation will be maintained abroad much longer than they were after the last World War. If a stable peace is to be achieved, vast populations must be fed during the early part of the reconstruction period. It is estimated that rationing in the USA will continue for about 18 months after the end of this war; in England, for two years. After the last World War meat was not de-rationed in England until a year after the Armistice; butter, not until May 1920; sugar, in November 1920.

She can point out to shoppers and to diners-out their responsibility for the vicious black market which today wastes our resources. It would collapse at once if people would refuse to pay the high prices which perpetuate it. And she can help them adjust their lives to the new order with cheerfulness and intelligence.

Research . . .

Dry-Cleaning and Laundry Services in Wartime

J. FRED OESTERLING, DOROTHY SIEGERT LYLE, and RUTH M. HOWORTH

Dr. Oesterling is instructor in textile chemistry research at The Pennsylvania State College. Miss Lyle came to the Ellen H. Richards Institute there last September after teaching clothing and textiles at Harriet Whitney Vocational High School, Toledo, Ohio. When this article was written Miss Howorth was technical assistant in textile chemistry at the Institute, but on March 1 she began work at a Pittsburgh testing laboratory.

THE two textile service industries—dry cleaning and laundering—are called upon more heavily today than at any previous time in history, when both are laboring under severe shortages of manpower, of equipment, of transportation facilities, of fuel, and, to a lesser degree, of supplies.

The extreme demands made upon dry cleaning and laundering at this time may be attributed to the number of women who have gone into employment, to the higher-income level of the people of this nation, and to the extraordinary emphasis being placed on the conservation of textile fabrics in organized consumer and civilian defense circles.

Importance in Our Economy

From the point of view of sanitation, the two textile-cleaning industries are indispensable. In long-time bacteriological studies carried on by the department of bacteriology and the Ellen H. Richards Institute at The Pennsylvania State College, it has been found that either a complete dry-cleaning or a complete laundry procedure will destroy all of the bacterial life in run-of-mine consumer fabrics and also specific types of pathogenic organisms.

The heavy wartime flow of textile articles into commercial laundry and dry-cleaning plants indicates that people believe it economical of time to have fabrics cleaned outside the home. Less total hours of time, less fuel, and less supplies are required on a national basis when a relatively small number of people with highly specialized equipment can clean or launder articles on a mass-production basis.

Mack, Kessinger, Ottinger, and Deck (*1*) have shown that home dry cleaning does not remove soil efficiently from fabrics and that it wastes solvent. Moreover, all dry-cleaning solvents are inflammable or toxic or both. On a plant scale, highly specialized equipment can take care of these hazards.

Home laundering can be done with only mechanical hazards, but the home launderer can approach the good commercial process in soil removal and whiteness retention only if she exercises extreme care in softening the water by a modern method and uses a sequence of heavy suds baths and clear rinses, according to Mack, Mostoller, and Wenger (*2*).

As background for the wartime status of the dry-cleaning and laundry industries, a brief review of the major steps in the two respective processes is here given:

Dry-Cleaning Procedure

Dry-cleaning procedures differ in detail from plant to plant according to volume and type of work and mechanical equipment available. Typical procedure is as follows:

Checking and Marking

Garments and household textile fabrics are checked and recorded as they arrive at the plant and are marked with tape or tags, with a code denoting ownership and delivery time. Such information as fabric type or presence of stains and of worn areas is recorded.

Inspecting and Classifying

Articles are then inspected for ornaments which may be damaged or which may abrade textile fabrics, for objects left in pockets, and for conditions which will render the article unsuitable for cleaning. Fabrics with tendered areas and certain kinds of stains are noted at this step if not earlier. Most plants warn the owner of an article of any difficulties foreseen. Next, textile articles are classified as to dark, intermediate, and light color, and as to type of fabric; then they are grouped accordingly. Special articles are set aside for hand cleaning.

Brushing and Pre-Spotting

In some plants, fabrics are routinely dry brushed with a hand-operated or motor-driven brush to remove dirt from under the seams, the cuffs, and from the inside of pockets. Some particularly stained textile articles are laid out on a slab and brushed with dry-cleaning solvent and a so-called pre-spotting agent—that is, a preparation containing dry-cleaning soap and certain organic chemicals which will remove various kinds of stains, particularly those which may not come out in the dry-cleaning process proper and which might even be set by the warmth of drying after the dry-cleaning operation.

Dry Cleaning

Whatever type of dry-cleaning machine is used, it consists essentially of a washer in which articles are gently agitated while in contact with dry-cleaning solvent to which a dry-cleaning soap or detergent may have been added. Articles remain in this machine through the various stages of dry cleaning and rinsing as follows:

(1) Initial rinse with dry-cleaning solvent flowing alternately in a circuit through the dry-cleaning machine and through a pressure filter for 10 minutes. This flushes out the loose soil, which is retained by the filter so that a continuous stream of clear solvent flows through the fabrics.

(2) The continuous flow system is closed off, a clear batch of solvent is pumped into the dry-cleaning washer, and a dry-cleaning soap is added. The fabrics are agitated in this soap-solvent combination from 10 to 20 minutes. The soap and solvent then are dumped into underground recovery tanks.

(3) The continuous flow system again is put into operation, and clear solvent is pumped through the washer for about 10 minutes or until a gauge shows that the solvent is satisfactorily free from soil.

Extracting and Drying

After dry cleaning, most of the solvent is removed from textile articles by means of centrifugal extraction. Light-weight articles are hung in a closed cabinet or room and are dried with the aid of a current of warm air. Heavy articles, such as men's woolen suits, are dried in a rotary perforated drum through which warm air is passed.

Inspection, Spotting, and Auxiliary Treatments

In a dry-cleaning process of a very curtailed type, special stain removal, called spotting in the industry, is omitted altogether or is done superficially. In a thorough dry-cleaning procedure, all articles are inspected carefully after immersion in dry-cleaning solvent to see that all stains are removed before the article is sent to the finishing department. If stains or spots are still present, the article is sent to the spotting department or is routed back to the dry-cleaning department.

Wet Dry-Cleaning

If, after the dry-cleaning operation or after hand spotting, the article is found to have water-soluble stains over a considerable area, it is sent to the wet dry-cleaning department for a good brushing with neutral soap or other detergent and water.

Finishing

Articles of wearing apparel and many household textiles are finished on a steam press which allows large areas to be pressed at one time. With women's dresses particularly this treatment is supplemented by the use of hand irons or steam puff irons for areas not suitably finished on a steam press. Knitted fabrics are blocked into shape by means of suitable equipment; velvets are steamed and brushed; blankets and curtains may be dried in frames; and other articles are handled in whatever way is most likely to give them their initial size and appearance.

Why Price Reductions

The procedure outlined above, except for minor modifications, is followed in all dry-cleaning plants doing a standard job at reasonable prices. The elimination of parts of this procedure, particularly initial brushing, the use of soap or of continuous flow rinsing during dry cleaning, and of part or all of the spotting procedure, with short cuts in finishing constitute the basis for any radical price reductions in this industry.

Power-Laundry Procedure

The cleansing and ironing or finishing of washable fabrics follow these definite steps:

Identification and Classification

The "marking-in" of the laundry bundle consists in assigning a numerical-alphabetical code to each article in a consumer's bundle, by attaching a piece of tape or marking the article itself with ink which is visible only under an ultraviolet lamp or with a permanent ink applied in concealed places. Temporary identification is sometimes used in the form of numbered clips or safety pins which are removed when the articles are assembled for delivery.

Soiled fabrics are then separated as to fiber content, color, type, and texture of the material. As many as twelve classifications may be made.

Washing

After identification, the soiled clothes are taken to the washroom, where special equipment and processes are used.

Colored fabrics, particularly cotton and linen, are given several suds baths followed by as many rinses as are needed to remove all soap and washing soda. Sour, a noninjurious organic acid, or an acid salt, is added to the last rinse bath to neutralize the last traces of soap. Sour also reduces the tendency of any colors to print or creep during extraction (centrifuging to the point where the fabrics are just damp enough for ironing) and ironing. This step makes it possible for the commercial laundry to handle many colored fabrics of poor dye quality which could not be washed successfully at home. Finally, the sour acts as a sterilizing agent.

The washing temperatures for colored work range from 80°F for the more fugitive dyes up to 120°F for those of better fastness. Softened water is used in each step.

White work, which makes up the larger portion of family bundles, is washed in much the same manner as are colored fabrics except that higher temperatures are used. Sodium hypochlorite bleach in low concentrations (a stain removal and sterilizing agent) is added to the last suds bath. The complete washing process ordinarily consists of four suds baths and four or five rinses followed by a sour and a blue bath. Woolens, silks, rayons, and fabrics of unusual composition or texture are washed by special methods.

Finishing and Ironing

As the clean laundry comes from the washroom, it is routed to the finishing departments. Flat pieces are ironed on a large roller type of

flatwork ironer. Hand irons and garment presses of various sizes and shapes are used for pressing wearing apparel. Such pieces as terry-cloth towels and knit underwear may be dried by hot air in a revolving drum or tumbler. Fabrics such as woolen blankets are hung up and dried in a current of warm air, sometimes fastened in a frame for retention of shape and size. Socks and hose are dried on steam-heated forms.

When ironing or drying is complete, the finished product is sent to the assembly department for sorting and packaging.

Shortages in the Industries

The textile service industries—dry cleaning and laundering—are faced with a multitude of shortages, both major and minor.

Manpower

The greatest shortage in both industries is in manpower. As losses to the armed forces and to the war industries have cut deeply into the ranks of workers skilled in these service industries, it has been necessary to train unskilled workers as quickly as possible and even to handle an increased volume of work with reduced personnel and to effect as many changes in procedure as would improve labor efficiency without serious decreases in quality of service.

Machinery and Equipment Shortages

No new machinery is available, and replacement parts are not easy to obtain. Therefore, old machinery must undergo as much repair as local facilities provide with an occasional part bought from the factory. The expanded volume must therefore be met by longer hours of operation of present equipment. Shortages of facilities for delivery, particularly of rubber, and speed and mileage restrictions for trucks have resulted in drastic curtailment of deliveries of cleaned and laundered goods.

Shortages of Supply

Dry-cleaning solvent. In the dry-cleaning industry, two major types of cleaning solvent are employed, each requiring special equipment: (1) Stoddard solvent—a petroleum distillate with a higher flash point and hence less fire hazard than motor fuel, and (2) chlorinated hydrocarbons—such as carbon tetrachloride, trichlorethylene, and perchlorethylene—solvents which do not require a separate building for the cleaning operation.

At the beginning of the war, no chlorinated solvent was available for civilian use except a small amount already manufactured, because chlorine was needed for sanitation of Army camps and for the production of many articles of warfare. This caused the dry-cleaning plants equipped for using chlorinated solvent either to reduce their operations or to carry on all or part of their cleaning operation in a neighboring Stoddard solvent plant on a wholesale basis. More recently, chlorinated dry-cleaning solvent has become available to the dry-cleaning industry in somewhat larger quantities.

Dry-cleaning and laundry soap. In both industries, soap is an indispensable supply which to date has been available in large enough quantities, although the types of fats from which soaps are made have been changed considerably because of the wartime loss of certain imports.

Detergents other than soap. A more serious problem for the dry-cleaning industry is the reduced availability of certain detergents other than soap because the raw materials of which they are made are needed in the manufacture of war necessities. Dry cleaners formerly using nonsoap detergents must now turn to soap derived from fats.

Miscellaneous Shortages

In the dry-cleaning industry, many minor items once accepted by the consumer as a matter of course are now scarce or unavailable. Metal hangers can now be used only if they are returned by the consumer. This difficulty is now less acute with the advent of the cardboard hanger.

As kraft wrapping paper is scarce, many cleaners use paper bags only for special ar-

ticles such as light-colored garments. Shortages of metal clips for identification of garments, many spot-removal reagents including ammonia, and fuel oil if this had been used to generate steam, all combine to keep the dry cleaner aware that a war is in progress.

In the laundry field the need for fuel oil is acute wherever this was used to generate steam, and materials for converting to coal have not been available. The lack of many small items make rough the path of those who wash the nation's linens.

The National Association of Dyers and Cleaners recently asked the public to restrict demands on the dry-cleaning industry to necessary services, which are defined as any men's or women's garments worn in essential business or defense work, including all men's business suits, all types of defense uniforms, household furnishings (considered essential on the grounds of the importance of hygienically clean home surroundings). Unnecessary dry cleaning is defined as luxury garments, such as evening and dress clothes and other clothes of unnecessarily luxurious and delicate fabrics.

Institute Research Findings

With every facility strained to the limit to produce good dry-cleaning and laundry work in a wartime economy, staff members of the textile chemistry laboratories in the Ellen H. Richards Institute at The Pennsylvania State College have evaluated all of their past researches on the amounts of detergents needed for optimum soil removal without wastage; and they have carried out supplementary studies in the same field so that procedures might be modified during wartime for the maximum efficiency without serious loss in quality of work done.

In Dry Cleaning

The data given in chart 1, page 236, show the comparative soil-removal efficiencies of dry-cleaning solvent (Stoddard solvent) during different times of cleaning with and without the use of dry-cleaning soap and with too small as well as optimum amounts of soap. Standard soiled fabrics were used. Soil removal is satisfactory if sufficient dry-cleaning soap is used and if the process is not prolonged more than 15 to 20 minutes. These trials involved only the step in the process in which soap is used. With the other steps in the dry-cleaning procedure included—the initial run in clear solvent and the final rinse—soil removal efficiencies approach 100 per cent.

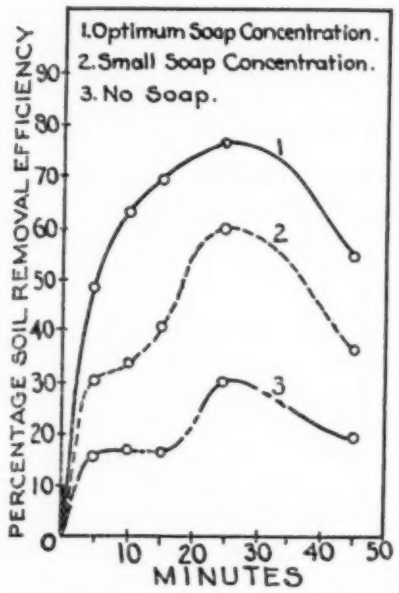


CHART 1. COMPARATIVE SOIL-REMOVAL EFFICIENCIES OF DRY-CLEANING SOLVENT (STODDARD SOLVENT) AS AFFECTED BY CONCENTRATION OF SOAP AND LENGTH OF CLEANSING TIME

In chart 2, page 237, the efficiencies of different concentrations of soap at one standard time of cleaning have been measured. From these studies it has been recommended that the use of dry-cleaning soaps be retained in the cleaning industry, in concentrations of approximately 2.5 pounds of anhydrous soap (or its equivalent in terms of the amount of synthetic detergent required for the same degree of detergency) to 100 gallons of cleaning solvent and that the cleaning time for the soap bath be from 15 to 20 minutes.

Higher concentrations of soap were not

found to be worth the cost, and increased lengths of cleaning time with soap above the specified amount did not increase soil-removal efficiency sufficiently to be worth the cost in manpower and tie-up of equipment. Extremely long times in the soap bath actually reduced cleaning efficiencies.

Eliminating soap from the dry-cleaning process or reducing it markedly resulted in poor cleaning and failed to sterilize the article of ordinary bacterial organisms or special pathogenic organisms.

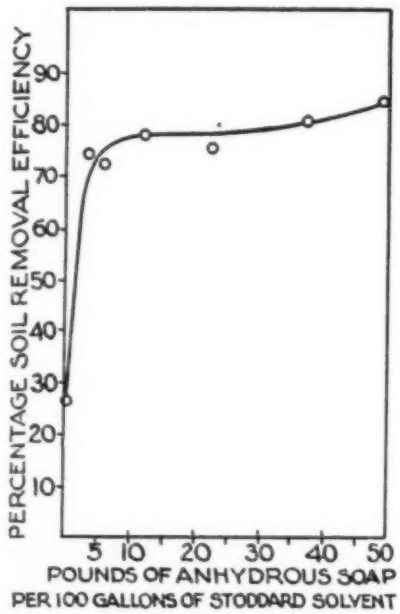


CHART 2. COMPARATIVE SOIL-REMOVAL EFFICIENCY OF DRY-CLEANING SOLVENT (STODDARD SOLVENT) CONTAINING VARYING AMOUNTS OF ANHYDROUS SOAP

In Laundering

The shortage of soap in the laundry industry has likewise not been severe; hence laundries are encouraged to use sufficient soap for good soil removal and sterilization but not excessive amounts which fail to increase detergency and sterilization.

Trials at the Ellen H. Richards Institute show that in laundering soil-removal is greatly impaired if the amount of soap is reduced below a certain optimum and is not increased materially if raised above this optimum.

Proper use of soap in the power laundry compensates in part for shortages of mechanical equipment. Classifying groups of fabrics into those which are only slightly soiled and those which are more heavily soiled makes possible a slight curtailment in procedure for lightly soiled fabrics. Also, technical changes in the respective concentrations of soap and alkaline builder for laundering white work have increased the soil-removal efficiency within a somewhat shorter washing time.

Some low titre (low temperature) soaps no longer are available; but, by preparing a liquid solution of certain higher temperature soaps, the laundryman has been able to use these solutions in low-temperature washing baths with reasonable satisfaction.

With Bleaches

Bleaching materials in the power-laundry industry, such as sodium hypochlorite and hydrogen peroxide, have been scarce because of the need in war industries for the raw materials of which they are made. These reagents are used in laundry procedures to remove stains and to sterilize. Sodium hypochlorite is more generally used than hydrogen peroxide, both because of its greater adaptability and its lower cost.

Early in the war when a severe shortage of chlorine bleach appeared imminent, the laundry fellowship at The Pennsylvania State College developed from nonstrategic materials a small, inexpensive electrolytic cell for generating chlorine from salt. Later, however, laundries were allotted 50 per cent of their former chlorine consumption, and this is being made to meet the needs of the industry.

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Divisions and Departments...

Family Economics Division

All of us know that significant changes in the family's financial situation have been caused by the war. Incomes for most families have risen markedly. This increase is partially offset, however, by increased demands on the income. One of the most obvious of these is the increase in cost of living, which by December 1942 had risen about 20 per cent over the September 1939 level. While the speed of increase has been checked, apparently 1943 will see a continued though probably a controlled rise in prices of commodities which families must buy.

Increased taxes make a further demand upon the family's pocketbook. More families than ever before are paying income taxes in 1943, and the amounts paid per family are much higher. The victory tax, already felt by those from whose pay envelopes deductions for the purpose have been made, takes another dip into the family income. These and other taxes are necessary if war expenses are to be paid and if inflation is to be kept under control. For the same reasons, buying of all except necessities must be postponed, and savings in the form of war bonds must take a large part of the family's income.

Other Problems

Increasing governmental control of consumption, a logical result of the shortage of civilian goods, is another feature of the war economy felt by all consumers. Such control attempts to distribute the existing supply as equitably as possible, to lower consumption of scarce goods, and to direct consumption into desirable channels.

Understanding of the necessity for control and of the means used to effect it should be a part of the knowledge of every consumer. Realization of the need of conformity to the letter of these regulations and of the desirability of voluntary co-operation with their spirit should be a prerequisite of consumer action.

Special problems are offered by families whose incomes for various reasons have not increased or may have declined at the same time that living costs have risen. These include wage earners who do not belong to organized labor groups and who, therefore, may not have shared in wage increases. Some are members of minority groups discriminated against in selection of workers in war industries. Some have given their main breadwinners to military service, with a resulting sacrifice in income. Families dependent upon businesses seriously affected by priorities have suffered. Rising living costs have borne heavily upon these families. Consequently help in efficient buying and careful handling of income especially needs to be made available to them.

Increased calls are being made upon the time of the homemaker and other family members. More work must be carried on outside the home, in the factory, and on the farm. At the same time, more home production is needed to supplement our supply of goods by means other than the usual industrial channels of production and in order to maintain in good condition articles which cannot be replaced during the war. This pressure upon time brings with it many significant problems which need to be analyzed to determine the wisest use of time and energy. The family economist can be of service in making this analysis and in suggesting desirable adjustments.

Task of the Professional Worker

The professional worker in family economics has the task of seeing that these problems are known and understood and that methods of making the necessary adjustments in family living are worked out. The keynote in teaching family economics must be the consumer and the war. Research in the field of consumption is shelving some of its older problems and taking up new ones whose solution may be of importance during and after the war.

Members of the family economics division and other home economists whose work calls upon this field of knowledge must respond to these demands upon their time and abilities with energy, courage, and vision. Family economics committees of the state associations must encourage and help family economists in their various communities to shoulder these responsibilities during the war period.—MAY L. COWLES, *Chairman.*

Home Economics in Business Department

Work in nutrition education which received such impetus during 1942 is being continued by the department as the most important 1943 activity. Reports from local groups show that the home economics woman in business is being utilized widely in the nation's nutrition program. In November added impetus was given to the department's nutrition education project by the request of the U.S. Office of Defense Health and Welfare Services for organized co-operation of the group in state and local nutrition programs, especially in the Share-the-Meat effort. Also, last fall the War Production Board asked that seven members of the national group be lent by their companies for a two-month co-operative effort in organizing women for the national salvage drive.

Red Cross, Nutrition, War Bond Work

Close co-operation with the Red Cross Nutrition Service is mentioned by many groups. The Twin City HEWIB's are being used by the Red Cross Nutrition Council in Minneapolis for five-minute broadcasts. Everywhere members are teaching nutrition and canteen classes and giving nutrition talks. In Cleveland, a branch of the Stage Door Canteen uses volunteer HEWIB's in foods work. The Pittsburgh group has just completed a nutrition refresher course taught by one of its members. The HEWIB Orphans report that almost every member is working in Red Cross or in state nutrition programs.

The District of Columbia group has done excellent work in the Share-the-Meat campaign in training the personnel furnished by the OCD to visit homes. Of the 95 home economists who attended the HEWIB training sessions, 65 signed up to teach the OCD personnel, who visited 30,000 homes to explain the reasons for sharing meat.

In Kansas City, meetings in 1942 with the home economics teachers were so successful that this year the HEWIB's are meeting both with that group and with the dietitians twice monthly. These HEWIB's co-operated with the Women's Chamber of Commerce in a Women in War Week to stimulate the sale of war bonds to help buy a bomber—a gift from the women of Kansas City.

In Cleveland, meetings this year have centered around "Living in Wartime." Among topics covered have been defense housing, food rationing, nutrition, and wartime textiles.

At the request of home economics students in the University of Minnesota, the Twin City group met with them in February to discuss jobs. Massachusetts HEWIB's have co-operated extensively in training classes for leaders in the Share-the-Meat program and in food demonstrations. In order to put more emphasis on fish instead of on variety meats, the Massachusetts Fisheries Association has asked the Boston group for help in developing recipes for unusual varieties of fish. At OPA's request they are volunteering as speakers for grocers' meetings and food distributors' clinics on rationing.

Meat Sharing, Safety, Mass Feeding

Quite naturally, the Chicago group has been active in the Share-the-Meat program. Working closely with OCD, a committee of HEWIB's organized 16 city-wide training meetings for block wardens. Many consumer meetings on sharing the meat have been conducted by home economists of the meat companies. A plan is being worked out for co-operative cooking schools in theaters in which OCD, food industries, and the city nutrition committee will co-operate. The HEWIB's also are co-operating with the new home safety committee of the Illinois Home Economics Association.

In New York City 50 HEWIB's have volunteered for participation in the city nutrition committee's plan for training block leaders for the Share-the-Meat program. A nutrition training course has also been organized for restaurant operators and chefs. Many members gave volunteer service at the CDVO Information Center last summer.

St. Louis reports co-operation on the industrial feeding program, a state nutrition activity.

On the Pacific Coast a seven-point program is keeping the San Francisco group more than busy. In addition to extensive nutrition work, they are doing such things as setting up exhibits for local home economics association meetings, participating in a lunch-box derby, acting as volunteer fruit pickers and donating earnings to the group's treasury, and tying in at every meeting some project for servicemen's groups.

All Philadelphia members are promoting nutrition through publications, lectures, exhibits, and radio.—MARIE SELLERS, *Chairman*.

New Books . . .

The Standard of Living in 1860: American Consumption Levels on the Eve of the Civil War. By EDGAR W. MARTIN. Chicago: The University of Chicago Press, 1942, 451 pp., $4.50.

The purpose of this book is, in the author's words, to describe not the standard but the level or scale of living in the United States on the eve of the Civil War, as a contribution to economic history. The book concerns itself with certain facts about such aspects of life as foods, housing, clothing, education, and recreation rather than with the attitudes of the people toward their use, which would be a part of the standard of living. For example, emphasis is placed on what foods were produced and eaten, not on the efforts of the people to discover food values, which as early as the 1830's had already become a "movement."

To give a fair picture of the facts is extremely difficult. Secondary sources for the period are not very satisfactory. The books and especially the magazines and newspapers of the period are voluminous, but accurate and objective accounts in those days were even less common than they are now, and in those days also there were differences in levels of living by sections of the country and by social and economic groups that are not found today. Statistics for the period, even government statistics, are in many cases highly inaccurate. The author occasionally falls into the error of too easy generalization, for example, on page 99, "The parlor always had a fireplace," a statement which even his own evidence elsewhere does not support. Nevertheless, he has done a good job. He has consulted a great body of materials of many types, and his general picture is not only detailed but fair.

Level of living is so closely bound up with the satisfactions constituting the standard that it is not easy for a philosophically inclined person to discuss the former alone. Although the author avoids bringing in the opinions of satisfactions held by the people themselves, he tends, particularly toward the end of the book, to present his own. From the facts, however, home economists are given a good start toward drawing their own conclusions as to the significance of changes in the real American standard of living. The study breaks ground in a new direction. We need more such factual studies for other periods.—ELIZABETH E. HOYT, *Iowa State College*

Economics and the Consumer. By E. M. ANDRES and C. D. COCANOWER. Boston: Houghton Mifflin Company, 1942, 553 pp., $3.50.

The authors of this elementary text in economics have tried to develop it around economic situations and activities more or less familiar to their readers. It is written from the point of view of the consumer. But the authors believe that "the problems of the consumer cannot be understood without an elementary knowledge of economic principles"; hence, the introductory chapters provide a brief survey of the economic process.

Following this survey there are discussions of topics commonly considered in textbooks on consumer economics, supplemented by some less frequently included, such as taxation, fraud and gambling, communications, and recreation and travel. The chapter "To See or Not to See" provides an excursion into the field of optics and the obtaining of suitable eyeglasses. The discussions of soaps, dentifrices, toothbrushes, and personal care are treated in some detail. A brief over-all picture is given of the federal food, drug, and cosmetic legislation.

The closing chapter, "The Economics of War and Peace," touches on various problems with which we as consumers are faced at present, the shift to war economy—prices, priorities, rationing, war production, labor problems, inflation, government regulation—and concludes with an admonition that they be "the subject of sober and thoughtful consideration by citizens."

Both students and instructors will appreciate the clear type and pertinent topical headings employed throughout the text. Each chapter is followed by a set of review questions, a few concrete problems, and a brief list of references. A well-organized index of twelve pages rounds out the set of student tools.—ALICE L. EDWARDS, *Mary Washington College.*

Education for Today and Tomorrow. By FLOYD W. REEVES. Cambridge, Mass.: Harvard University Press, 1942, 65 pp., $1.

This is the Inglis Lecture of 1942 delivered at Harvard University. For several years Dr. Reeves has been dealing with the problems of educating young people to meet their economic, vocational, social, and political responsibilities in a rapidly changing world. He offers recom-

mendations as to the general character of this education for youth living in a "world bewilderingly different."—ALICE L. EDWARDS, *Mary Washington College.*

Youth and Instruction in Marriage and Family Living. By LAURA W. DRUMMOND. New York: Bureau of Publications, Teachers College, Columbia University, 1942, 186 pp., $2.35.

Educators and leaders in community and social organizations will do well to ponder the findings, conclusions, and implications of this study of questions and problems contributed by students and alumni of liberal arts colleges.

The study reveals "that young people today ask for realistic and functional family life education centered around their problems of living in this modern world."

"Marked individual differences within groups" and "the fact that the participants from two colleges varied significantly in a number of background traits" point out the desirability of analyzing the special needs of each group in planning instruction in marriage and family living.

The suggestions of college students and alumni concerning what they considered important material for inclusion in instruction in marriage and family life revealed concern with sex, premarriage problems, family relationships, family finance, children, adjustment between different generations, discord, and religion. Less interest was manifest in the family as a social institution.

The implications of this study should be recognized by those endeavoring to provide functioning instruction to young people in marriage and family living—utilization of recommendations of the young people themselves; areas of greatest and least importance as judged by the group; admission to the class based on the individual's need and readiness rather than on his class or chronological age; and familiarity of leaders with resources of and recent findings in many related fields. The need for personal counseling services and availability of courses for adults in marriage and the family were also revealed.—ALICE L. EDWARDS, *Mary Washington College.*

Bonnie's Baby Brother and How He Grew. By ELIZABETH RIDER MONTGOMERY. New York: Frederick A. Stokes Company, 1942, 95 pp., $2.

For years there has been a crying need for a book like *Bonnie's Baby Brother.*

So very often one sees the older child in a family consumed with jealousy when a new baby arrives. It's so natural, too, for this jealousy to be there. The older child, accustomed for all the years of his short life to the undivided attention and admiration of his parents and their guests, cannot be expected, unaided, to share willingly such a valuable thing. It has long been realized that the older child needs careful preparation for his new brother or sister, and also after the baby comes, he needs even more to be made to feel important in relation to the new one—not just left out.

Mrs. Montgomery, Bonnie's mother, faced this problem herself. How could she prepare Bonnie so that she would welcome the baby and how could she give the baby all the attention a new baby must have and still make Bonnie feel she had gained and not lost by having a brother added to the family?

How Mrs. Montgomery managed is told in *Bonnie's Baby Brother.* It's a simple story, told in language Bonnie herself and all other big brothers or sisters of five or thereabouts can understand. Ralph W. Berry's 48 photographs of Bonnie and Buddy have great appeal for the young readers to whom the book is directed.

For anyone planning to make a baby gift to a family where there is an older child, be sure to include a gift for the older one—and nothing could be more appropriate than a copy of *Bonnie's Baby Brother.*—DOROTHY V. WHIPPLE, M.D., *pediatrician, Washington, D. C.*

The Parents' Manual: A Guide to the Emotional Development of Young Children. By ANNA W. M. WOLF. New York: Simon and Schuster, 1941, 331 pp., $2.50.

Parents who are trying to make a success of parenthood will find much encouragement and helpful advice in this well-written, nontechnical book, which is primarily concerned with the emotional forces affecting the child in that period from birth to six or seven years and his relationships with his parents and the other family members.

In discussing the problems of both parents and children, the author draws on her experience as a parent and her work on the staff of the Child Study Association of America, both as a writer and as the director of the Association's Family Guidance and Consultation Service.

With the general advice to relax and enjoy your children, the writer discusses such topics as adjusting the new baby to his home, habit formation, discipline, brothers and sisters, the child and his friends, sexuality in childhood, playthings and

entertainment, the father's role in the family, psychological growing pains, and problem parents.

A comprehensive list of suggested reading adds further value to the book.—MRS. BERNICE K. FINN, *Washington, D. C.*

Financing the War. Symposium conducted by the Tax Institute. Philadelphia: Tax Institute, 1942, 357 pp., $2.50.

"The shot-gun marriages of half the states to general sales taxes," the ever-warmer interest of Congress in a nation-wide sales tax, and the current debate on various other ways of financing the war make the appearance of this book most timely.

It is a collection of 19 papers read at a Tax Institute held a week before the Pearl Harbor bombing; nevertheless, for readers who want a working knowledge of the complexities of financing the war and checking inflation, it is almost as useful as if the sessions had been yesterday. It would make a good volume for the use of taxation study groups.

Wide variations in point of view are represented, from rightist to at least mildly left-wing attitudes. Among the speakers were men from Princeton, Harvard, the Wharton School of Finance and Commerce, the U. S. Treasury Department, the National Resources Planning Board, the U. S. Tariff Commission.

The six sections of the book take up federal fiscal policies in general, excess profits taxation, control of inflation through revenue policies, adjustments to ease the impact of defense taxes, the experience of other nations in financing wars, and tariffs as they affect international relations.—H. P. H.

The Ceramic Arts. By WILLIAM H. JOHNSON and LOUIS V. NEWKIRK. New York: The Macmillan Company, 1942, 158 pp., $1.20.

This booklet is one of a series on industrial arts education and is intended to introduce junior high school students to the field of ceramics. Simple, clear-cut, and detailed explanations of the ways to construct things make it a good buy for schools with the equipment for making such things as pottery and plastics.—H. P. H.

When Doctors Are Rationed. By DWIGHT ANDERSON and MARGARET BAYLOUS. New York: Coward-McCann, Inc., 1942, 255 pp., $2.

The war emergency provides the background against which Mr. Anderson and Miss Baylous paint a glowing picture of the medical profession. The functions and operation of the Procurement and Assignment Service in the selection of doctors for the armed services and for maintenance of civilian health are described in such rosy terms that the naive reader might conclude that such perfection surely had divine guidance. Those whose own experience has revealed unmet civilian and military medical needs will read with skepticism.

The book ends on the theme that the postwar health of the nation depends upon a return to the old system of individual private practice and that any socialization of medicine spells disaster.

The authors seem oblivious of the cataclysmic changes taking place in the world—changes which require from some members of the medical profession (we believe a minority, though a powerful minority) more of vision and of social-mindedness than they have thus far mustered.

Mr. Anderson, the senior author of *When Doctors Are Rationed*, is the director of public relations of the Medical Society of the State of New York, and, therefore, it may be assumed, reflects the point of view of one of the most influential of the state medical societies. His collaborator, Margaret Baylous, is therapist at the Charleston General Hospital, Charleston, West Virginia.—H. P. H.

Food: A Weapon for Victory. By BERTRAM FOWLER. Boston: Little, Brown and Company, 1942, 185 pp., $1.50.

Mr. Fowler outlines here his plan for feeding the desolate populations of Europe and shows that we must prepare now for the time when our doctors, food administrators, and benevolent policemen march across national boundaries to prevent black anarchy.—H. P. H.

Vegetable Gardening in Color. By DANIEL J. FOLEY. In collaboration with CATHERINE E. MEIKLE. New York: The Macmillan Company, 1942, 255 pp., $2.50.

This book exploits the springtime weakness of mankind faced with a seed catalog. Vegetables, herbs, berries, grapes are shown in color with names of best varieties, methods of cultivation, insects and diseases which beset each. The book went to press too early to be aligned with the USDA's new planting policies, but it does carry such warnings as: melons take too much space for a home garden.—H. P. H.

Abstracts . . .

FAMILY ECONOMICS

Contributed by Dorothy Nuetzman, Maryland Y. Pennell, Jean L. Pennock, and Bernice Kunerth Watt of the Family Economics Division, U. S. Bureau of Home Economics

Cost of living indexes in wartime, F. M. WILLIAMS, F. R. RICE, and E. D. SCHELL. *J. Am. Statist. Assocn.* **37,** No. 220 (Dec. 1942), pp. 415–424.

A cost-of-living index measures, over a given period, changes in the cost of goods and services customarily purchased by a given group, with the pricing always based on goods of the same quality. The drastic changes in the supply of consumers' goods available to civilians since December 1940 have made necessary a number of changes in the computation of the cost-of-living index of the Bureau of Labor Statistics. Adjustments have been made currently, frequently without an adequate statistical base.

The rationing of automobiles, tires, and tubes, for example, has meant changes in the relative importance of the several transportation costs to moderate-income workers in large cities. In December 1941 streetcar fares and automobiles had relative weights of 28.9 and 30.3; in June 1942, the two weights were adjusted to 46.9 and 5.7. The disappearance of articles from the market—for example, such articles in the housefurnishings group as washing machines and mechanical refrigerators—has led to changes in the relative importance of the various groups of goods and services included in the index.

Problems of pricing are as difficult to solve as problems of adjusting weights. The agents must watch for quality changes as well as changes in size and package weights. The Bureau is continually developing new specifications, as goods formerly purchased are no longer on the market.—M. Y. P.

Standard of living: An empirical test of a definition, H. R. COTTAM and A. R. MANGUS. *Rural Sociol.* **7,** No. 4 (Dec. 1942), pp. 395–403.

This article describes an empirical test of the hypothesis that level of living, social participation, and social adjustment are components of a broader concept—standard of living. The population tested was a sample of 299 Ohio farm families representing major level-of-living areas.

Among the 77 items selected to represent level of living were home conveniences, expenditure patterns, and occupation. Social participation in organized groups was studied through affiliation, attendance, contributions, committee work, and officerships. Expressions of satisfaction or dissatisfaction made by each respondent to 19 different segments of his social environment were used as the basis for measuring social adjustment.

The degree of relationship was tested while successively holding constant such factors as occupation, age, family composition, and educational attainment. Because the hypothesis was not disproved, research workers may, with greater confidence, consider standard of living a broad concept embracing the three types of behavior.—M. Y. P.

Food consumption and dietary surveys in the Americas, R. M. WOODBURY. Montreal: International Labour Office, Sept. 1942, 64 pp.

Recent studies in some American countries show average food expenditures among wage earners to vary from 30.2 per cent of total consumption expenditures for British families in Canada to 71.1 per cent for families in Chile.

The percentage of food expenditures for milk products, eggs, fruits, and vegetables varied from 22.7 and 24.1 per cent in Mexico and Venezuela to 44.3 and 47.1 per cent in the USA and Canada. Meat and fish accounted for from 14.0 per cent in Mexico (1938) and 14.4 per cent in Venezuela to 25.8 per cent in Antioquia, Colombia. In Mexico (1934) 35.0 per cent and in Venezuela 29.3 per cent of the food expenditures were for bread and cereals, whereas in the other countries the averages were from only 22.0 to 13.1 per cent.

The quantities of principal foods consumed, calculated on the basis of adult male units, are reported for each country. The use of milk products and eggs was relatively high in the USA, Canada, Argentina, and Mexico and low in Puerto Rican rural areas, Venezuela, Colombia, and Chile. Greater quantities of vegetables and fruits

were used in the USA, Canada, Puerto Rico, Chile, and Venezuela than in the other countries. Meat consumption was highest in Argentina with an average of 148.4 kg per adult male unit per year; for other countries studied it averaged from 44 to 81 kg.

The highest consumption of bread and cereals was found in Mexico (323.8 kg) followed by Argentina (216.3 kg) and Venezuela (180.6 kg). Relatively low consumption was found in the USA, Canada, Puerto Rico, and Colombia.

A discussion is included of methods used in dietary surveys and of problems involved.—B. K. W.

Electricity cooperatives, 1941. *Mthly. Labor Rev.* **56,** No. 1 (Jan. 1943), pp. 91–93.

During the first five years of its operation, the rural electrification program brought about tremendous changes in rural areas. At the beginning of 1935, only 10.9 per cent of the farms in the United States had central-station electric service; on June 30, 1941, the proportion had risen to 34.9 per cent.

By the end of 1941, the Rural Electrification Administration had made allotments aggregating $433,988,321 to 869 borrowers, for the construction of rural lines and electrical facilities. Of these borrowers, 793 were nonprofit or co-operative enterprises. REA lines were operating in almost three-fourths of the counties in the United States. At present no new REA-financed lines are being started except where the lines provide electric service for war purposes.

An appliance survey during the first six months of 1941 indicated a growing use of electrically operated appliances and farm equipment. Among the most popular appliances used were socket-power radios, flatirons, washing machines, refrigerators, electric pumps, poultry lighting devices, and cream separators.—M. Y. P.

Britain punishes her black sheep. *Consumers' Guide* **9,** No. 1 (Dec. 1942), pp. 11–14.

British success in dealing with violators of price and rationing orders offers sharp contrast to the flourishing black markets in other European countries. Explanations for the difference include: less privation of necessities, elaborate controls and regulations of trade, enforcement of orders, severe penalties for violations, and encouragement of public support. In three years of war, persons convicted of black-market activities represented about one-tenth of one per cent of Britain's population.

The article mentions typical violations—theft, fraud, waste, selling at higher than ceiling prices—and the penalties imposed. Monthly figures issued by the Ministry of Food indicate that the largest number of violations occur when retailers fail to display prices or when they sell above the legal maximum.—D. N.

The cost of tuberculosis control in the Department of Health, New York City, 1940, H. R. EDWARDS. *Milbank Mem. Fund Quart.* **25,** No. 1 (Jan. 1943), pp. 64–79.

During 1940 the Department of Health conducted mass X-ray surveys of apparently healthy adults and adolescents in addition to its usual preventive program through the city chest clinics.

A study of the costs of the two methods and their findings, particularly the prevalence rate per person examined, leads the author to the conclusion that both methods should be employed and that joint programs of the Department of Health and the Department of Welfare for the examination of relief recipients and others of low economic status are desirable. He also recommends that in the examination of high school groups the tuberculin test be used and that only those with a positive reaction be X-rayed.—J. L. P.

Health, nutrition, and living standards, F. G. BOUDREAU. *Land Policy Rev.* **5,** No. 8 (Winter 1942), pp. 11–12.

The writer examines the vital statistics of those countries with the lowest mortality rates (Holland, New Zealand, Australia, and Denmark) and the reports on our mortality rates by disease and occupation and on recent morbidity studies, and comes to the conclusion that there is a definite relationship between high death and morbidity rates and poverty. He finds the relation of dietary deficiency and poverty equally clear. To make available to all classes diets adequate in the essential nutrients would lead to an advance in public health comparable to that which followed the work of Pasteur, and he believes that the United Nations committed themselves to secure this in pledging "freedom from want" in the Atlantic Charter.—J. L. P.

FOOD UTILIZATION

Contributed by Lucy M. Alexander and Elsie H. Dawson of the Food Utilization Section, U. S. Bureau of Home Economics

Brining vegetables: research results, F. W. FABIAN. *Canning Age* **23,** No. 13 (Dec. 1942), pp. 678–679.

Preliminary results to date from 120 experiments on salting five different vegetables—peas, corn, green string beans, green lima beans, and okra—are presented.

Peas can be preserved by a 70-degree brine concentration, but a higher one is preferable. Sulfur dioxide cannot be relied upon to supplement the brine, and it is inadvisable to permit any preliminary fermentation.

Corn can be preserved in a lower brine concentration than peas since fermentation in corn is much slower than in peas and apparently is not harmful.

Green string beans can be preserved by a low brine concentration starting at 40 degrees if it is raised 2 degrees a week until 50 degrees is reached, then raised 1 degree a week until brine registers 60 degrees on a salometer; here, too, fermentation caused no apparent harm.

Green lima beans can be preserved with a minimum concentration of 60 degrees but higher is preferable, even as much as 80 degrees.

Okra can be preserved with as low a concentration as 40 degrees if there is a 2-degree increase per week until the 60-degree point is reached.

In general, loss of color is greater with low concentration of brines than with high, where fermentation is practically nil. Blanched vegetables in general ferment more readily than do unblanched. Salting does not destroy the enzymes catalase and peroxidase.—E. H. D.

Effect of various cooking methods upon subjective qualities and nutritive values of vegetables, E. V. S. BRINKMAN, E. G. HALLIDAY, W. F. HINMAN, and R. J. HAMNER. *Food Research* **7,** No. 4 (July–Aug. 1942), pp. 300–305.

The cooking utensils used in this experiment were those representative of various cooking methods: enamelware open kettle using a comparatively large quantity of water; two types of aluminum "waterless" cookers using no water or a very small amount; small aluminum pressure saucepan utilizing steam under pressure.

Representative types of vegetables were cooked for tests on color, flavor, texture, and odor. Those used for comparing the retention of calcium, phosphorous, and vitamin C were peas, carrots, green beans, cabbage, cauliflower, and white turnips.

In general, so far as subjective qualities are concerned, the small pressure saucepan was as satisfactory as the open kettle for cooking all green vegetables except asparagus, as well as for cooking carrots and white turnips. The pressure saucepan was less desirable for such brassicaceous vegetables as cabbage, broccoli, and cauliflower. Waterless cookers produced a satisfactory product only with carrots and green beans cut in narrow strips.

From the standpoint of nutritive values, no one of the cooking methods showed definite superiority over another so far as calcium was concerned. With phosphorous and vitamin C, the variation in retention was greater, and the pressure saucepan had, on the average, a slight advantage over the other methods.—E. H. D.

Changes occurring during the blanching of vegetables, W. B. ADAM, G. HORNER, and J. STANWORTH. *J. Soc. Chem. Ind.* **61,** No. 6 (June 1942), pp. 96–99.

Losses of nutritive substances during blanching with water or steam for different lengths of time increased with the surface area per unit weight of the vegetables. Sugars, mineral matter, protein, and vitamin C were all affected in the same way. Blanching improved the flavor and texture of some vegetables but had little effect on the color. Blanching reduced their weight and volume and increased the weight which can be filled into a can. It had an appreciable effect on the pressures developed in the cans. All the desirable effects are produced within the first 2 minutes of the blanching period, which should be as short as possible.—E. H. D.

Digestion of beef by papain, G. Y. GOTTSCHALL and M. W. KIES. *Food Research* **7,** No. 5 (Sept.–Oct. 1942), pp. 373–381.

This paper reports an investigation of tenderizing beef by papain, measuring the results chemically in terms of protein breakdown. The authors summarize their findings as follows:

"Meat is digested by papain extensively and rapidly at 55° and 75°C (131° and 167°F) but very slowly at room temperature. At 55°C papain is stable for 28 hours in the presence of meat. At 100°C (212°F) papain is rapidly destroyed in the

presence of meat so that there is very little digestion above 100°C. Papain does not penetrate solid pieces of meat at room temperature.

"When beef is ground the rate of digestion by papain is much increased.

"The rate of proteolysis is not increased by previous cooking of either ground or unground meat.

"In the usually recommended procedure for tenderizing meat, unground meat is painted with papain and then cooked. The experiments performed show that under such conditions papain would not penetrate very far into the meat, and the papain on the surface would be inactivated by heat before much digestion could take place."—L. M. A.

Some cooking qualities of homogenized milk. I. Baked and soft custard, R. E. CARR and G. M. TROUT. *Food Research* **7**, No. 5 (Sept.–Oct. 1942), pp. 360–369.

The effect of homogenization of milk on some of its cooking properties was studied by means of baked and soft custards. Objective and subjective tests were used to compare the custards made from homogenized and unhomogenized milk.

The cooking time for custards made with homogenized milk was from 15 to 20 minutes longer than for custards made with similar unhomogenized milk because the rate of heat penetration was more rapid in the latter.

Baked custards made with homogenized milk gave significantly higher standing-index values than those made with unhomogenized milk, indicating better gel formation in the former. They were also rated firmer by the judges and when measured by the Curd Tension Meter.

The amount of syneresis upon standing for custards made with homogenized milk was significantly less than for custards made with unhomogenized milk.

Soft custards made with homogenized milk gave a more viscous custard than those made with unhomogenized milk, according to the MacMichael viscosimeter.

The judges' opinion on the palatability of the custards made with the two types of milk showed no preference in the baked custards but a decided preference for soft custards made with homogenized milk.

In general, both baked and soft custards made with homogenized milk were superior in quality to those made with unhomogenized milk.—E. H. D.

Influence of temperature on the beating and baking properties of spray-dried egg, J. R. HAWTHORNE and E. B. BENNION. *J. Soc. Chem. Ind.* **61**, No. 10 (Oct. 1942), pp. 151–153.

Evidence is presented to show that a considerable improvement in the aerating power of spray-dried egg can be achieved by the use of higher temperatures than are normally employed in making sponge cakes. When the whisking temperature is in the region of 120°F, it has also been found advantageous to add a larger amount of water than usual to the egg-sugar mix before whisking is started. Methods of applying these findings in normal baking practice are suggested.—E. H. D.

Storage changes in spray-dried whole egg powder, L. S. STUART, H. H. HALL, and E. E. DICKS. *U. S. Egg & Poultry Mag.* **48**, No. 12 (Dec. 1942), pp. 629–633, 658.

Preliminary observation indicates that the most important factor in the preservation of good quality during storage of dried eggs may be the control of the moisture content of the product. Spray-dried whole egg that has been properly dried will not mold if stored at relative humidities of 85 per cent or less at 30°C or below. Bacterial growth will not occur at 30°C unless the relative humidity of the storage atmosphere exceeds 90 per cent.

Changes in the solubility of spray-dried whole egg powder during storage are much more pronounced when the moisture concentration of the powder is greater than 5 per cent than when it is less than that amount. Marked decreases in solubility may occur in stored dried egg powder independent of changes in free fat acid content, formol nitrogen value, or total free carboxyl groups.

Death of bacteria at moisture concentrations greater than 5 per cent appears to be associated with the chemical changes involved in loss of solubility. Changes in the pH values of stored dried egg become more pronounced as the moisture concentration of the egg increases from 1.94 to 9.96 per cent. It is pointed out that these are only preliminary and tentative conclusions.—E. H. D.

HOUSING

Contributed by Juliette Mayer of the University of Wisconsin

Services in a trailer community, J. E. CODY. *Survey Midmthly.* **78,** No. 11 (Nov. 1942), pp. 295–296.

Living quarters for war workers should provide more than four walls, a roof, and a floor if there is to be a sense of family security in new surroundings. The lack of this security may be reflected in the quality of work done.

The Federal Public Housing Authority defense project adjacent to the Glenn L. Martin bomber plant at Middle River, Maryland, includes 10 dormitories housing 600 men and more than 1,000 trailers housing that many families. A conscious effort has been made to provide the most important elements in community life. While there is need for further extension of activities, the ones already provided go a long way to prove that the people housed in dormitories and trailers, like those who live in houses, need something more than protection from the elements.

New housing program, W. J. CASEY. *Architectural Record* **92,** No. 4 (Oct. 1942), p. 7.

The outlook for housing is more encouraging since there is more recognition of the fact that essential housing is vital to the whole war production program. This has been brought about chiefly through the acute labor situation.

Temporary housing is not conducive to high morale and working efficiency. War production will depend more and more on men with large families and women who have children to care for. This may force the War Production Board to make greater allotments of materials for war housing. The first step was taken when WPB made 42,000 tons of finished steel available for approved private and public war housing that was already under way.

The month in building, [Editorial]. *Architectural Forum* **77,** No. 5 (Nov. 1942), pp. 33–34.

In place of new building of war housing the program is now to fill old houses. This has been stepped up by the contemplated complete stoppage of new building, increasing scarcity of critical materials, forced realization that soon there will be little else to turn to. This brings war housing to the point where it should have started.

The National Housing Agency has shifted toward leasing of houses, for the duration, in areas where workers' homes are badly needed. The new program under Frank Baue, new director of Homes Use Program (HUP), will permit the government to lease desirable houses, remodel them, assume all losses during the period of the lease, and return them to owners after the war. Home Owners Loan Corporation will carry out alterations. Fifty-six active war centers will witness this experiment on new housing methods.

"Shacktown" developments prevented by California ordinances, [Editorial]. *Am. City* **58,** No. 1 (Jan. 1943), p. 68.

"Shacktown" developments have been prevented in California cities and counties by using two types of ordinances. The homes-on-wheels, which shelter many war workers and migrant crop pickers, must come up to certain standards. Auto and house courts and camp spaces are regulated by ordinance, thus preventing squatter camps.

Ordinances provide for lot lines, for sanitation pertaining to grounds and living units, and for space requirement in house courts.

Rent for victory, [Editorial]. *New Repub.* **107,** No. 16 (Oct. 19, 1942), pp. 484–485.

Emergency housing should be rental housing built by a public agency not concerned with profits. The alternatives are: revise downward our estimate of the amount of fighting material we can produce in order to release critical materials so that some of our workers can be sheltered and enabled to produce a smaller but certain amount of war goods or go along and wait for production to fall as the lack of housing brings illness and inefficiency or, in the case of many plants about to open, keeps workmen away altogether.

Of the new dwellings provided by private builders, probably about half do not house war workers. Emergency housing should be rental housing. A Federal Housing Administration nation-wide survey as of March 31, 1942, showed that only 22 per cent of privately financed housing units which had war priority ratings were on a rental basis. People other than war workers had bought most of the houses.

In April the WPB and NHA ruled: that due to shortage of materials no more new houses can be built in any community until everyone now in that community is working, until every room is rented, every convertible building is being used,

and there remains a need for more workers who must be brought from outside.

If war production is not to be cut we must rent. The NHA must be given power to billet and to requisition and convert every possible structure. Billeting has not been seriously considered. Public opinion must demand it and remedy the situation.

Billet the war workers, C. ABRAMS. *New Repub.* **107,** No. 21 (Nov. 23, 1942), pp. 673–674.

The housing program to provide 1,600,000 dwellings for war workers by July 1943 is stalled again. The lack of housing has upset production in hundreds of war plants. With a famine in critical materials, compulsory billeting can no longer be avoided. It cannot solve the whole housing program, but it will help as it has in England.

In an effort to escape billeting, a new Homes Use Program under the National Housing Agency will comb production centers for all types of nonused housing to care for war workers, but it will fail to get adequate housing. The virtue of England's compulsory-billeting program is that it has clearly laid down a government policy. Families accepted the policy and in 9 out of 10 cases need no compulsion.

Many homeowners in the United States would rather house workers for the duration than have their equity in housing destroyed by flimsy federalized developments. The billeting program should be a part of the broader NHA program.

The use of critical materials for private Federal Housing Administration housing, 40 per cent of which is occupied by nonwar workers, should be stopped at once. Billeting accentuates the need for the sacrifice of certain jealousies among WPB, NHA, and the OPA.

The WPB might recognize the importance of housing construction; the OPA should turn over its rent-control activities to the NHA; and the NHA should go on with a program designed to win the war rather than to please the politicians.

The role of the housebuilding industry: Building America, M. L. COLEAN. Washington, D. C.: National Resources Planning Board, July 1942, 29 pp.

The need for probably 900,000 to 1,200,000 new dwellings a year for the decade after the war plus a large volume of repair presents a challenge to the housebuilding industry.

House construction in the past has been overconcentrated in a limited number of places or types of places or in a restricted upper-priced market. The new building must extend to the farms and the small towns as well as to the large cities.

Failure to meet the housing needs has been due to the local character of the housebuilding industry and its weak management, which in turn is due to its dependence upon a host of subcontractors, suppliers of materials, laborers, and lenders for performing each separate job.

Any great cost reduction and diversification of market depends upon three things: (1) simplification and standardization of the parts of the house, (2) simplification of the processes of assembly, and (3) volume production.

If we are to have a large volume of low-cost house production with its social and economic benefits, we must face the necessity for industrial reorganization and adopt policies that will speed its progress. These policies will touch a number of related problems: the availability of land, ample credit facilities, and encouragement given to the development of more competent forms of industrial organization.

A program is outlined for immediate and long-range action.

Housing as a health officer's opportunity, H. WILLIAMS. *Am. J. Pub. Health* **32,** No. 9 (Sept. 1942), pp. 1001–1004.

Recent experience in Baltimore has shown that there is a real opportunity for the public health officer who will recognize housing as a legitimate field for preventive health service.

The Commissioner of Health and the City Health Department in co-operation with the City Welfare Department and the local press and other official and nonofficial agencies brought about changes in inadequate ordinance provisions. Two highly desirable new ordinances were enacted, "Ordinance on the Hygiene of Houses" and "Rooming House Ordinance," which greatly strengthened the authority of the city health department in preventing overcrowding of rooming houses.

SOCIAL WELFARE AND PUBLIC HEALTH

Contributed by Ragna A. Anderson, Dorothy B. Hacker, Catherine Leamon, Jean Kuentzel Tavener, Alene H. Theisner, Jean Chamberlin Tripp, and Marcia E. Ward—all members of social welfare and public health associations of Detroit, Michigan

Surveys of the nutrition of populations, J. B. YOUMANS, E. W. PATTEN, and R. KERN. *Am. J. Pub. Health* **33,** No. 1 (Jan. 1943), pp. 58–72.

A description of the population, general methods and procedures of a diet survey, and the findings in respect to calories in rural middle Tennessee are given. The survey included 1,200 subjects of all ages and sexes, both Negro and white, whose nutritional status was determined by a record of food intake, a history and physical examination, and various laboratory tests. The findings reveal a moderate to severe deficiency in calorie intake as compared to the allowances of the food and nutrition board of the National Research Council. It is suggested that these allowances may be unnecessarily high.—D. B. H.

Handbook of nutrition—feeding the aged, E. L. TUOHY. *J. Am. Med. Assocn.* **121,** No. 1 (Jan. 2, 1943), pp. 42–48.

Practicing physicians need to become interested in the problem of feeding the aged, as food can play an important part in prolonging the physical well-being of those past middle age.

In the past, medicine has been concerned with the reduction of diseases which affect the young. This effort has been so successful that many more people now live to become old. It is predicted that there will be 22,000,000 people in the USA over 65 years of age within another generation. Practical suggestions are given for feeding the aged.—J. C. T.

Dangerous effects of vitamin D overdosage on dental and peridental structures, H. BECKS. *J. Am. Dental Assocn.* **29,** No. 17 (Nov. 1, 1942), pp. 1947–1967.

Since the results of previous experiments with overdoses of vitamin D have not been uniform, an experiment in which seven dogs were fed varying amounts of vitamins A and D from various sources was carried out for 308 days.

Regular examinations and roentgenographic and histological studies showed that excessive vitamin D retarded jaw and tooth development, caused malformation and malocclusion, caused osteosclerosis of the jawbone, formed pulp stones, and had a detrimental effect on the connective tissue parts as well as the hard structures.

Excessive vitamin A, however, seems to counteract the effect of the overdose of D, although it does not eliminate it. The vitamins from natural fish oils were found to be less dangerous than the irradiated products. Since these changes in dogs are the same as some clinical and roentgenographic observations in humans, extreme care should be taken in recommending vitamin D for use in dental ailments.—J. K. T.

Is fluorine a therapeutic agent for dental caries, H. C. HODGE. *J. Am. Dental Assocn.* **29,** No. 17 (Nov. 1942), pp. 2063–2068.

Recent clinical tests on school children show that the incidence of new dental caries can be reduced one-half in one year when drinking water contains one to two parts fluorine per million. Laboratory tests show that sound enamel from noncarious teeth contains more fluorine than does sound enamel from carious teeth. Although the safe level of oral fluoride administration is not known, children whose drinking water contained one part per million exhibited no toxic symptoms, while the incidence of caries declined. Excess fluorides cause the mottling of forming teeth, but not of fully formed erupted teeth. However, because of the small number tested, fluorine therapy for dental caries is not yet recommended for general use.—J. K. T.

Dietary conditions in industry, R. GOODHART. *J. Am. Med. Assocn.* **121,** No. 2 (Jan. 9, 1943), pp. 93–97.

Studies are reported which indicate the need for a better solution of the problem of feeding in industry. The feeding of industrial workers for maximum efficiency is a complicated task. For satisfactory results the co-operation of industry, labor, the community, and the government are needed.—J. C. T.

Food consumption and preference of families with low incomes in Halifax, N. S., E. G. YOUNG. *Can. Pub. Health J.* **33,** No. 10 (Oct. 1942), pp. 480–485.

"The data obtained in the dietary survey of

the Canadian Council of Nutrition carried out in Halifax, 1939–40, has been re-examined to determine the consumption per person per week of the most important foodstuffs as purchased. These results have been compared with similar data available from studies in the United States and Great Britain, and in relation to total income and food expenditures. The consumption of butter, eggs, milk, cheese, fish, and meat was most notably contracted by falling expenditure. Bread and potatoes were independent and relatively constant. Other dietary items, with the exception of sugar, did not show a consistent relationship. The Halifax dietary was relatively high in fish and low in milk consumption."—C. L.

Foster family day care, K. DEW. PHELPS. *Survey Midmthly.* **78,** No. 12 (Dec. 1942), pp. 326–328.

Increasing employment of women in war industries has centered attention on day care of children. There are three basic requirements for a foster-family day-care program: (1) Mothers must be willing to use this form of care; (2) foster-family day homes must be available near the family home; (3) the program must be in the hands of a social agency with trained personnel and good standards.

Foster day care is preferable for babies under two and for the older child who is fearful or immature or does not fit into a group. Frequent supervision to insure health of children is necessary. Diet, habit training, play, and adjustment to members of the household should be observed and discussed.

Board should be paid to foster parents by the agency to serve as a basis for visiting and maintaining a good relationship. Parent fees should be paid by the parent to the agency to establish a good relationship and furnish an opportunity to help with other problems. Rates for board range from 50 cents to $1.60 per day depending on hours, number of meals, and actual work involved.—R. A. A.

Keep rats out, S. F. HARBY. *Hygeia* **21,** No. 1 (Jan. 1943), pp. 18–19, 77.

Men and rats, having like tastes, are mortal competitors.

There are more rats than people in the United States. A single pair of rats if left undisturbed would become 1,500 in a year and 360,000,000 in three years.

Every rat eats two dollars' worth of food a year, a board bill in this country alone of 260 million dollars.

They have become a serious menace to man not only as destroyers of food and material but as carriers of at least seven deadly diseases, including the plague and typhus fever.

Establishing and enforcing proper rat-proofing in building codes will insure protection for new buildings, since rats are not necessarily slum dwellers. Old unprotected buildings harboring rats should be torn down.

A community can aid in destroying the rat by making repairs of walls, windows, and floors; getting rid of rubbish; using covered metal garbage cans; storing food carefully; properly disposing of garbage and permitting no city dumps.

A pamphlet "The Rat and Rat-Proof Construction of Buildings" may be obtained free from the U. S. Public Health Service, Washington, D. C. Other literature and films are also available.—A. H. T.

The treatment of indebtedness problems, M. U. MOORE. *Family* **23,** No. 6 (Oct. 1942), pp. 224–232.

Indebtedness as seen in the family agency may be classed in one of three groups: (1) debts contracted to meet an acute emergency or to cover a chronic deficit in the budget for consolidated bills, (2) borrowing because of emotional factors and disturbed family relationships, and (3) debts contracted with little or no intention of meeting the obligations. Cases illustrating these different types of borrowing are cited.

The treatment and use of relief by the family agency in such cases is discussed.—M. E. W.

Assisting the light work client to help himself, E. R. BAROL. *Pub. Welfare News* **10,** No. 10 (Oct. 1942), pp. 2–4.

In the fall of 1941 the Department of Public Welfare of Baltimore was confronted with the problem of helping the socially maladjusted relief recipients to accept existing employment opportunities. Persons who had initiative and willingness to help themselves had already obtained employment.

The length of dependency of 120 cases selected for the experiment revealed that 60 families had received public assistance from 6 to 9 years; 46, from 3 to 5 years; and 14, less than 3 years.

The five workers selected to carry out the

experiment tried to help the individual gain confidence in his ability to perform in some limited work capacity. The unit utilized the resources of the U. S. Employment Service for vocational placement and the Maryland Rehabilitation Service for retraining.

The experiment showed that in an industrial area there is an employment opportunity for almost any person who can perform light work. It is the role of the case worker to help the client to want a job and to direct him in seeking and keeping employment.—R. A. A.

Protect your family from T.B., E. R. LEVINE. *Parents Mag.* **17,** No. 12 (Dec. 1942), pp. 32, 109.

To control tuberculosis, open cases must be discovered and transformed into closed or arrested cases. If this could be done, tuberculosis would cease being a major disease. The success of a campaign for its control depends more on the ordinary citizen than on the family physician or the tuberculosis specialist.

All parents should insist that the tuberculin test be made a routine examination by local health authorities for all school children. If this test is "positive" then X-ray examination is necessary to be sure no disease is present. When disease is found to be present, every member of the household should immediately be examined. Adults need to protect themselves by means of periodic health examinations.—M. E. W.

Why don't we trim trichinosis? M. D. SHELLEY. *Hygeia* **20,** No. 12 (Dec. 1942), pp. 898–899.

The National Institute of Health in its investigation of trichinosis in 1937 found wholesale infestation of persons in the United States. Since urban population was chiefly represented in this investigation, further studies are now being made with rural and small town residents.

The chances are that one in six persons is infested with the worm which causes trichinosis. A single ounce of diseased pork can contain thousands of trichinae.

In 1866 the public was warned that eating pork was risky and that this meat should be thoroughly cooked before it was eaten. It was thought that meat inspection would protect people, but it was later learned that such inspection was not practical as one or several samples from a carcass may be examined with negative findings, while trichinae swarm in other parts of the same animal. Trichinosis must be prevented as doctors have no cure for it.

Since raw pork scraps fed to swine are a means of infection, some cities require thorough cooking of garbage, but more than one-half of our cities of over 10,000 population are feeding raw garbage. By effective regulation of the feeding of garbage, Canada has almost eradicated the disease.

Effective legislation has been urged by the National Institute of Health but has not yet been secured. The U. S. Department of Agriculture warns consumers against trichinosis through a poster stating that pork is a savory food, rich in protein, fat, and vitamin B, and advising thorough cooking as a safeguard.—A. H. T.

The challenge of unused human resources, A. J. CARLSON. *J. Am. Dietetic Assocn.* **18,** No. 10 (Oct. 1942), pp. 647–651.

Education and training of our youth toward greater efficiency as well as greater happiness as adult citizens needs improving. Specifically a child needs to learn earlier the fundamental biological law that he who will not work shall not eat.

Present methods of education are limited; primitive and native curiosity need to be retained.

A civilization that discards men and women of 50 or 60 years as no longer a link in the chain of human labor and as no longer productive physically and mentally is thoroughly unbiologic, wasteful, cruel, and inhuman. Such a system is a reflection on our education and indicates a lack of intelligent planning if opportunities for work are not afforded.

A medical study of 6,000 families is recommended to learn whether one-third of the American population is ill fed.

Since healthy men constitute our most important material resources we must proceed without delay to diagnose the symptoms of incipient dietary deficiencies. The sciences of medicine, biology, and chemistry should find what constitutes an optimum diet for optimum health as far as health is determined by diet alone.

Pending these findings a diet made up of natural foods is recommended. Two things should be done: cleanse present food and nutrition science of all fads of commercial and political propaganda and find means of making nutrition comprehensive to the common man.—A. H. T.

TEXTILES AND CLOTHING

Contributed by Caroline Boyer, Margaret B. Hays, Margaret McGarity, and Bess Viemont Morrison of the Division of Textiles and Clothing, U. S. Bureau of Home Economics

Dyes and the war, F. B. HILLHOUSE. *Dom. Commerce* **31,** No. 14 (Jan. 28, 1943), pp. 20–22.

During World War II there is no shortage of dyestuffs such as existed during the first world conflict. The domestic dye industry is now able to supply sufficient dyes of types suitable for Army and Navy uniforms and equipage and, at the same time, provide for essential civilian requirements. Competition for raw materials is the biggest problem confronting the dye industry, since the chemicals used are also vital to ordnance and chemical warfare.

About 725 different dyestuffs are produced by American manufacturers. Of these, the production and sale of only 9 anthraquinone vat dyes are restricted to military uses. This leaves a wide range of dyes available for civilian goods, but a drastic decline in the demand for dyes for civilian use occurred in the late months of 1942, due largely to the enormous production of military fabrics rather than to a lack of demand on the part of civilian purchasers.

In addition to their use with textiles, coal-tar dyes are used to color leather, paper, many foods, soft drinks, confectionery, cosmetics, and pharmaceutical preparations and are used in the manufacture of inks and wood stains. However, in 1942 the textile industry accounted for about 78 per cent of the total consumption of coal-tar dyes.—B. V. M.

Colorfastness of certain types of dyes on women's and children's wearing apparel fabrics, H. E. BORTON, C. B. WALKER, P. B. MACK, C. A. SIEBERT. *Am. Dyestuff Reptr.* **31,** No. 25 (Dec. 7, 1942), pp. 603–627, 641.

This article reports the Northeastern Regional Experiment Station Textile Project in progress for nearly 7 years, during which time 1,000 women's and children's wearing-apparel fabrics were subjected to laboratory testing. Methods, findings, and conclusions are completely reported.

The technique used to compare consumer wear with laboratory findings offers a means of improving current laboratory tests for colorfastness so that they will simulate wear more closely. The 40-hour laboratory fading test for colorfastness to light is not sufficiently rigorous to predict wear performance accurately.—C. B.

The effect of resin finishes on the color fastness and physical properties of rayon gabardine, H. M. FLETCHER, W. M. HAY, and A. J. SURRATT. *Am. Dyestuff Reptr.* **31,** No. 21 (Oct. 12, 1942), pp. 489–493, 514.

With the present shortage of wool, silk, and linen, new-finished rayons will replace these natural fibers. An investigation of 16 rayon gabardine fabrics, 8 nonresin-finished and 8 resin-finished, was made to ascertain the permanence of resin finishes to dry cleaning and laundering and their effect on the colorfastness, breaking strength, elongation, and shrinkage of rayon gabardines.

Carbon tetrachloride and the enzyme method removed all finishes on nonresin-finished fabrics. The nitric-acid method removed finishes of both groups. Dry cleaning did not remove the finishing materials nor greatly affect the appearance of either group. Five launderings removed practically all the finish from the nonresin-finished fabrics. After ten launderings, only a small amount of resin finish was removed. The eight resin-finished fabrics showed a high degree of fastness to ten dry cleanings and launderings. Vat dyes were not used in either group.

Fading of nonresin-finished fabrics was greater than that of resin-finished. Fading due to laundering was greater than that due to dry cleaning. The resin-finished group shrank less than the nonresin-finished. For the nonresin-finished fabrics, the shrinkage due to laundering was greater than that due to dry cleaning. The resin-finished fabrics exhibited no significant differences in shrinkage for dry cleanings and launderings.

Resin-finished gabardines were definitely stronger than those without resin finish. Dry cleanings did not affect the breaking strength of either group while laundering decreased the breaking strength of the nonresin-finished. The resin finish did not increase resistance to abrasion but increased the wet breaking strength.—C. B.

Causes and effects of the proposed Federal Trade Commission colorfastness rules, E. M. EDGERTON. *Am. Dyestuff Reptr.* **31,** No. 22 (Oct. 26, 1942), pp. 519–526+.

During the first 36 weeks of 1942, production of white fabrics increased 11 per cent; that of

colored fabrics, 8 per cent; that of black fabrics, 6 per cent; and that of prints decreased 33 per cent. In wartime, efficient production of fabrics that will give full and long service is essential.

The main points of issue in Rules 3, 5, and 7, coupled with graded terminology A-B-C-D, are discussed. As written, the proposed rules make it necessary either to test a color for all of the seven listed color-changing agencies to which it might be subjected or to arbitrarily degrade the product by making negative statements such as "Not fast to dry cleaning" even though the end use of the product is not known.

Misrepresentation either on labeling or through lack of it which results in discarding any garment before it has served its normal use means real waste in production.—C. B.

Development of soybean fiber by Ford, L. STAUFFER. *Rayon Textile Mthly.* **23,** No. 11 (Nov. 1942), pp. 45–48.

Much progress has been made in the output of the first successful textile filament to be derived from a vegetable protein source, the soybean. The crimp of the soybean fiber gives it approximately the resiliency of wool. Its strength has increased well above 80 per cent of that of virgin wool.—M. McG.

Milkweed instead of kapok. *U. S. Testing Co. Serv. Bull.*, No. 47 (Sept.–Oct. 1942), p. 5.

Milkweed and kapok fibers show great similarity in diameter size, length, and ash content. Additional physical qualities characterizing both fibers include luster, lightness, softness, elasticity, buoyancy, and insulation. Kapok and milkweed fibers resist moisture and are suitable for bedding, mattresses, and pillows in most climates. These fibers are verminproof and sanitary because of their high cellulose content.

Kapok from Java, Sumatra, Ceylon, and the Malayan Peninsula is not available. Milkweed floss can be used as a substitute of equal or even superior quality for kapok. The milkweed gin makes possible the separation of the floss from the seeds in an economical way to compete with cheap labor in Java.

In the present emergency, kapok and cork are not available for use in life preservers and jackets. Milkweed floss, a better insulator than wool, can be used for clothing purposes for the Army, Navy, and Air Force. For Navy pilots, a jacket with three pounds of this floss as a lining would keep the pilot warm in the substratosphere and in case of an ocean accident would keep him floating for over 100 hours.

After the war, milkweed may be one of the most important crops in the United States. Its roots will serve for soil conservation purposes, and the floss, as a permanent substitute and domestic source for kapok.—C. B.

Critical survey throws new light on the ramie question. *Textile Research* **12,** No. 8 (June 1942), pp. 25–28.

Ramie is one of the strongest vegetable fibers known. In Louisiana, it matures in from 50 to 60 days. The main cost of ramie is in the decortication and purification preliminary to shipping. In order to introduce the culture of ramie into this country on a commercial scale, it will be necessary to perfect a mechanical method of separating the stalk from the ribbons without mechanical injury to the fiber.—M. B. H.

Glass finds new fields of usefulness, C. B. WELSH. *Dom. Commerce* **30,** No. 23 (Dec. 3, 1942), pp. 11–12.

The use of glass fiber for clothing goes back to the fairy tale of Cinderella and her glass slippers. Actually though, as a textile fiber, glass fiber dates from 1893, when coarse glass strands combined with silk were made into lamp shades for the Columbian Exposition in Chicago. By 1931 research had developed glass-fiber products suitable for air filters and thermal insulation, but not until 1935 did fiber glass have sufficient strength, pliability, and fineness for weaving into cloth.

Fortunately, fiber glass is made from abundant, nonstrategic raw materials. It has many war uses: in combat ships as insulation on pipelines, in bulkheads, and around ammunition magazines; in the construction of airplanes as insulation on wires and cables in lighting instruments, radio, and ignition systems and as moistureproof tarpaulins for instrument-loaded cockpits; also as insulation in electrically heated diving suits, now standard equipment for Navy divers. Fiber glass is proving a reliable substitute for such critical materials as asbestos, cork, some metals, and mica.

Aside from insulation in refrigerators and ovens, its present civilian uses are limited. However, the industry is firmly established and appears to have a promising future after the war.—B. V. M.

Waterproof and water repellent finishes, P. WENGRAF and E. W. K. SCHWARZ. *Am. Dyestuff Reptr.* **31,** No. 23 (Nov. 9, 1942), pp. 551–557.

This discussion includes the history and development of waterproof finishes, waterproof versus water-repellent finishes, and methods of testing for waterproofness and water repellency.

The old method of waterproofing clothing fabrics by clogging the pores with a coating of lacquers is being discontinued. For outerwear fabrics, the most successful method combines the most efficient water repellency with the greatest air permeability. Yarn strength and fabric construction are of special importance.—C. B.

Luminescent pigments and coatings, G. F. A. STUTZ. *J. Optical Soc. Am.* **32,** No. 10 (Oct. 1942), pp. 626–628.

Useful organic dyes and inorganic pigments of today are activated by radiant energy in the short-wave length that is visible and near ultraviolet spectral range. Organic fluorescent materials are used in dyed plastics, textiles, ink, powders. Inorganic fluorescent or phosphorescent materials, which have an afterglow, are used in plastics, paints, and inks. Dials, charts, maps, and printed matter requiring weather and sunlight resistance are prepared for use by airplane pilots, bombardiers, and other machinery operators where maximum visibility and legibility are required.—M. McG.

A comparative study of four methods for the quantitative determination of wool in mixed fabrics, L. E. WEIDENHAMMER. *Am. Dyestuff Reptr.* **31,** No. 19 (Sept. 14, 1942), pp. 441–445.

Caustic-boil, aluminum-chloride, sulfuric-acid, and flotation methods for determination of wool in mixed fabrics were studied at the U. S. Bureau of Home Economics. Four fabrics manufactured for experimental purposes and two commercial blanket fabrics were analyzed.

Results indicate that the sulfuric-acid method generally gives higher results than do the other methods. The flotation method has the lowest degree of precision. The caustic-boil method is quick, convenient, and accurate if the correction factor can be accurately determined. The aluminum-chloride method tends to give results that are too low by about the same amount as the sulfuric-acid results are too high. Both the aluminum-chloride and sulfuric-acid methods are precise and reasonably accurate.—C. B.

Tendering of cotton fabrics, F. M. STEADMAN. *Textile Research* **13,** No. 2 (Dec. 1942), pp. 15–19.

The tendering of natural cellulosic materials during processing is believed to be a degradation of the cellulose molecule. The degree of attack in clothing treated for gas protection is roughly in ratio to the extent of bleaching and scouring.

For cotton herringbone twills, it is proposed that cleaning methods be improved so as to reduce the chemical cleansing required.

The effect of certain dyestuffs on the tendering of cotton also is being investigated.

The Quartermaster Corps is interested in practical means of preparing, dyeing, and finishing fabrics with a minimum of damage to cellulose and in setting up adequate procedures by which to insure that a reasonable degree of degradation has not been exceeded.—M. B. H.

Analysis of 84 qualities of cotton dress prints, M. B. HAYS and G. B. FRANKENBERG. *Rayon Textile Mthly.* **23,** No. 10 (Oct. 1942), pp. 74–76; No. 11 (Nov. 1942), p. 69.

Cotton dress prints, including percale, made up one of the several classes of fabrics selected for a recent co-operative study by the Farm Security Administration and the U. S. Bureau of Home Economics. The 84 fabrics analyzed were obtained from co-operative stores in several regions and from large retail and mail-order houses. For each fabric, weight per square yard, count, breaking strength, shrinkage, amount of sizing, and colorfastness to light and washing were determined by standard procedures.

This study showed these prints to have poor colorfastness to light. To be fast to light and washing, dress prints should test Class 3 or higher. "Colorfast" labels usually mean colorfast to washing only. Labels to help the consumer in buying these fabrics should include the maximum amount of shrinkage and average breaking strength.—M. McG.

From the Editor's Basket . . .

"The Carry-Over Into Homes of the Teaching of Family Living to In-School and Out-of-School Youth" is a 17-page report for classroom teachers of a study sponsored by the home economics section of the American Vocational Association from which teachers could get many helpful suggestions.

The committee appointed to carry on the study included Frances Bailey, Vivian Crow, Berenice Mallory, and Letitia Walsh. Miss Walsh, as chairman, was responsible for collecting the data, organizing the material, and writing the bulletin. It may be ordered from the American Vocational Association, 1010 Vermont Avenue, N.W., Washington, D. C., at 20 cents a copy or 15 cents each for 10 or more copies.

Three leaflets on day care of children of working mothers might be helpful to anyone who is trying to interest a community in this program. They are: "School Services for Children of Working Mothers," 6 pages; "All-Day School Programs for Children of Working Mothers," 12 pages; and "Nursery Schools Vital to America's War Effort," 12 pages. Each 5 cents, Government Printing Office, Washington, D. C.

A new magazine, *Family-Community Digest*, made its debut in February with a 32-page number of traditional digest format. It is published at Vassar College, Poughkeepsie, New York, and has a subscription price of $1 a year for six issues.

Three of the February contributions are condensations of articles which appeared first in other publications; one was "What Shall We Tell Children About War?" by Mary Shattuck Fisher, which was in the May 1942 JOURNAL OF HOME ECONOMICS. All the articles are by persons well-known in the field of family-life education. Among the writers are Charles I. Schottland, Caroline F. Ware, and Emily H. Mudd.

"Applying Nursery School Methods of Child Guidance in the Home" is a free, 48-page bulletin written by the department of child welfare and euthenics in the School of Home Economics at Kansas State College, Manhattan.

A federal sales tax is not far down the Congressional road—if today's portents do not mislead. And it is of high concern to us all that such a tax be written with wisdom.

Two recent pamphlets on the subject, from different points of view, will be of interest to JOURNAL readers: "How Can We Pay for the War?" by Maxwell S. Stewart and "Do We Want a Federal Sales Tax?" by Charles O. Hardy. The first is based on a research study by the National Bureau of Economic Research; the latter, upon one financed by Falk Foundation funds. Both are written in clear-cut language which persons without formal economics training can understand.

Writes Mr. Stewart: "Because it falls proportionately more heavily on the groups with low incomes, the sales tax is particularly ill-suited for tapping the sources of excess spending power. . . . Food, and possibly clothing, might be exempted from the tax. This would, however, greatly cut down the yield from the tax. A fairer arrangement would be a method by which consumers would be given certificates enabling them to buy a certain amount of necessities free of tax."

Mr. Hardy takes the stand that "the tax rate should be about 10 per cent, if the exemptions are limited to housing, medical care, and education, and correspondingly higher, if additional exemptions . . . are granted."

He shows that a tax with only the three exemptions would take 9.1 per cent of the income of persons having less than $500 a year. If, however, some relief were given to those at the bottom of the income scale through allowing each single person an exemption of $200 and each family $350, a sales-tax rate of at least 13 per cent would probably be required. The sales tax thus adjusted would take 1.6 per cent of the total income of this lowest group; 4.8 per cent of the incomes of those making between $500 and $1,000.

Mr. Stewart's pamphlet may be ordered from Public Affairs Committee, Inc., 30 Rockefeller Plaza, New York City, for 10 cents; Mr. Hardy's, from The Brookings Institution, 722 Jackson Place, Washington, D. C., for 25 cents.

Two recently revised bulletins of the Household Finance Corporation, 919 North Michigan Avenue, Chicago, are: "Money Management: the Food Dollar," and "Food Fats and Oils." Each costs 2½ cents in stamps.

"Consumers Can Help Win the War" is a $1, 121-page planographed booklet by Jessie V. Coles published by the University of California Press, Berkeley and Los Angeles.

Dr. Coles says in her preface that she wrote it especially for high school students and adult study groups but that she hoped it would be of value to consumers of all ages, incomes, and educational levels. In simple, concrete form she presents the basic facts about shortages of consumer goods, rationing, wartime prices, inflation, budgeting and buying in wartime; she gives practical suggestions for purchase and use of food, clothing, housing, and household equipment.

"Freedom from want cannot be forced on a democracy or given to a democracy. It must be won by them. Winning it needs courage and faith and a sense of national unity: courage to face facts and difficulties and overcome them; faith in our future and in the ideals of fair-play and freedom for which century after century our forefathers were prepared to die; a sense of national unity overriding the interests of any class or section. The Plan for Social Security in this Report is submitted by one who believes that in this supreme crisis the British people will not be found wanting, of courage and faith and national unity, of material and spiritual power to play their part in achieving both social security and the victory of justice among nations upon which security depends."

This is the final ringing paragraph of Sir William Beveridge's report which has captured the imagination of English-speaking peoples as have few other documents.

The Macmillan Company, New York City, has brought out a $1 American edition of it under the title "Social Insurance and Allied Services: Report by Sir William Beveridge."

What do other countries do about unemployment insurance? Which ones have family allowances and how do they differ? What medical care is provided by other governments?

This and many other questions are answered in the 50-cent, 100-page publication "Approaches to Social Security: An International Survey" recently published by the International Labour Office. As the preface states, it is published in part "to prepare the way for the planning of a complete social security programme, in readiness for post-war reconstruction."

It is distributed in the USA by the Washington Branch of ILO, 734 Jackson Place, Washington, D. C.

"Serve on the Farm Home Front." That's the name of an attractive leaflet recently issued by the U. S. Bureau of Home Economics and prepared by a committee on management problems of families in wartime, with home economics representatives from the AHEA, the Consumer Division of OPA, the U. S. Office of Education, and four agencies of the USDA. It would be excellent to hand out to adult groups or for teachers to use to stimulate family planning.

Teachers can get five copies free by writing to the Office of Information, U. S. Department of Agriculture, Washington, D. C. For sale, Superintendent of Documents, Washington, D. C., at $1 per 100 copies.

The case for FSA is eloquently presented in a 12-page, 10-cent, illustrated pamphlet "Food: the Little Farmer, the War, and the Future" by Courtenay Dinwiddie.

"A careful sampling for the country indicates that [in 1942] FSA borrowers produced 36 per cent of the total increase in milk produced *by all the farmers* in the United States; 10 per cent of the total increase in production of chickens *by all farmers*. . . . FSA borrowers numbered only 463,000 out of 4,700,000 bona fide farmers in the country. The proportion they contributed to increased food production is a plain indication of what can be done if the Farm Security Administration's program is expanded to reach hundreds of thousands of other low-income farmers who, with such loans and advice, can greatly increase their contributions to the Nation's larder."

An effective piece of literature through which to arouse citizens to write their Congressmen to ask that FSA funds be increased rather than scrapped as Senator Byrd and some others are urging. Order from National Child Labor Committee, 419 Fourth Avenue, New York City.

"Recommended Dietary Allowances" of the Food and Nutrition Board, National Research Council, 2101 Constitution Avenue, Washington, D. C., may be obtained without charge on request. It's a 6-page leaflet.

"Nutrition and Food Supply: The War and After" is the title of the special issue of *The Annals of the American Academy of Political and Social*

Science published as the January 1943 number—a volume well worth adding to any reference shelf. It may be ordered from the Academy, 3457 Walnut Street, Philadelphia, for $2.

It has four sections: "Science and Nutrition," 79 pages; "Food Supplies and Public Policy," 48 pages; "Consumption and Distribution," 63 pages; and "Production and Processing," 32 pages. Then follows a 47-page book department with reviews of publications outside the field of foods and nutrition.

Among the 52 persons whose papers are included in this impressive symposium are such well-known names as John D. Black, C. A. Elvehjem, Christine Heller, Hans Staehle, Karl Brandt, Ruth Leverton, Esther Batchelder, Esther Phipard, and Dorothy Dickins.

A niacin card and a protein card have been added to the charts published by the Philadelphia Child Health Society, 311 South Juniper Street, Philadelphia, in their revised 50-cent set of twelve cards off the press in December. On the front black bars on a yellow background give amounts of a given nutrient in average servings of eight common foods. On the back are listed foods richest in that nutrient, with amounts for average servings and recommended daily allowances of the National Research Council.

"Human Nutrition Research and Improvement in Mass Nutritional Status," Ellen H. Richards Institute Research Series, Publication No. 1, is a 35-cent, 39-page report obtainable from The Pennsylvania State College, State College.

Five snappy radio scripts for use in high schools to increase purchase of war savings stamps can be obtained free by writing Education Section, War Savings Staff, U. S. Treasury Department, Washington, D. C.

Two new radio programs are worth our telling homemakers about: "The Baby Institute," a 15-minute Blue Network program broadcast Monday through Friday at 10:30 a.m., EWT; and "Children and the War," a CBS series heard Monday afternoons at 4:30 EWT.

The former brings to the air pediatricians, child psychiatrists, and preschool educators; chairman of the program is Jessie Stanton of the Bank Street School, lecturer on child development at New York University. The latter is conducted by Mrs. Clifton Fadiman, editor of the Child Study Association publications.

"Democracy Means All of Us" is the title of a 30-page bulletin telling how communities can organize to study and meet community needs, especially their nutrition needs.

As the foreword states, its purpose is "to describe some of the arrangements that need to be made before community planning can be effective, and to point out some of the many exciting opportunities for creative thinking—for democratic action—which the national nutrition program offers."

Among those who prepared it are these AHEA members: Miriam Birdseye, Muriel Brown, Helen Stacey. In the appendix are charts showing how the defense nutrition program was organized in Wichita, Kansas; in Obion County, Tennessee; and in Louisville, Kentucky.

Free. Order from the U. S. Office of Education, Washington, D. C.

The American Library Association is getting up a good series of selected bibliographies, single copies of which can be purchased for 25 cents from the Association, 520 North Michigan Avenue, Chicago. Two are "Physical Fitness" and "U. S. Government Publications and the War"—each of which has two parts.

"The Rural Child in the War Emergency" is the title of a 10-cent, 37-page booklet which reports a conference called jointly by the Committee on Rural Education and the American Council on Education in Chicago last July. Order from the Committee, 5835 Kimbark Avenue, Chicago.

Chapters deal with the schools, the rural school child's contribution to the war, the teacher shortage, financing rural schools, school and community relationships, and postwar planning. Each chapter concludes with recommendations of action to deal with the emergency.

"Child Manpower—1943" is the title of a 34-page, 10-cent booklet published by the National Child Labor Committee, 419 Fourth Avenue, New York City. It reports in readable style increase in child labor, conditions under which children are working, the difficulties of labor departments in maintaining standards, and the tragic results that follow when immature youngsters are employed contrary to recommended standards and often in violation of laws.

News Notes . . .

General

Food Composition Data Needed in War Effort. The attention of HEWIB's connected with the food industry is called to the appeal of the committee on food composition of the National Research Council's Food and Nutrition Board that food composition data accumulated in the course of research and routine analysis by industrial foods laboratories be made active in the war effort. The committee, with Dr. C. A. Elvehjem as chairman, was organized at the request of the Quartermaster General of the U. S. Army to act as a repository and point of dissemination for authentic data on all foods being used or considered for use by all branches of the military service.

Data on new products; processed foods; and dehydrated meats, fruits, and vegetables especially are needed.

Communications should be addressed to Dr. Paul L. Pavcek, Secretary, Committee on Food Composition, National Research Council, 2101 Constitution Avenue, Washington, D. C.

Southern HEWIB's report shifting to wartime gear with nutrition and health programs on all fronts. Typical of this shift in activities is the report of Cephalie Lewis of the Atlanta Gas and Light Company that wartime activities of herself and staff have included organizing a canteen group among the Company's employees, engineering the building and equipping of a canteen trailer for emergency feeding, and organizing a nutrition committee to promote good health among the Company's employees and cut down absenteeism caused by illness.

And from Texas comes the report that Irene Nevill Aby of Bewley Mills, Fort Worth, has helped set up in Houston a city-wide organization of housewives to be trained in point rationing and stationed in grocery stores to help the uninitiated housewife get the most from her ration card.

Nebraska

Nebraska Home Economics Association. "Home Economics for Victory and Peace" was the theme of the annual meeting at the Cornhusker Hotel in Lincoln on February 13. As a war measure the usual two-day meeting was reduced this year to a one-day session, arranged to follow the annual District Homemaking Teachers Conference in Lincoln on February 12. Sectional meetings were scheduled for foods and nutrition, textiles and clothing, housing and equipment, and institution administration and business.

Out-of-state speakers included Ivan D. Wood, district engineer for the FSA, Denver, who spoke on "The Victory Garden—a War Necessity," and Velma R. Clark, regional nutrition representative of the Office of Defense Health and Welfare Services, Minneapolis, who talked on "The War Workers' Ammunition."

The general meetings included a talk on "The Geographic Aspects of Hemisphere Unity" by Dean Nels A. Bengtson of the University of Nebraska and a talk on "Learning to Live under Fire" by Dr. Arthur L. Miller, pastor of the First Presbyterian Church, Lincoln.

A reception and continental buffet dinner closed the meeting.

Consumer-Interest Committee. This committee, composed of representatives of the home economics teaching staff of the University of Nebraska, the home demonstration staff of the Extension Service, FSA home advisers, and vocational homemaking and adult homemaking teachers, holds monthly meetings to co-ordinate efforts in the consumer-interests field. Consultants representing OCD, OPA, the Better Business Bureaus, PTA, rural homemakers, and city homemakers have been asked to work with this committee. An extension home management specialist, Muriel Smith, serves as chairman.

Packets of literature on consumer information were prepared by the committee and are being used by each agency or group represented on it.

University of Nebraska. Sophie Wakim, who held an AHEA international fellowship for two years and has been a graduate assistant in the family life division for the past two and a half years, received her master's degree from the University in February. She has an assistantship at the Merrill-Palmer School this semester.

Extension Service. Forty counties in Nebraska are holding one-day "Farm Front" meetings as a means of getting to farm folk information that will help produce more milk, meat, eggs, and vegetables and conserve food and materials. Helen Rocke, Rizpah Douglass, Allegra Wilkens, and Dorothea

Follmer, extension specialists, are presenting demonstrations on "Your Clothes in Wartime" and "Making the Most of Our Meat Supply."

During January, Nebraska home demonstration club members were trained by specialists, home demonstration agents, and agricultural agents in the care and repair of home equipment. A circular entitled "Longer Life for Home Equipment," written by Mary E. Runnalls, state home management specialist, and Ruby Loper, extension engineer, was used.

Mrs. Helen Holdt, who has been district home demonstration agent at Sidney, became the Phelps County home demonstration agent on February 1. Her husband, Harry Holdt, is a member of the armed forces.

Mrs. Marie Burton, formerly a demonstrator with the Kerr Glass Manufacturing Company, has been appointed district home demonstration agent with headquarters at Sidney.

Ellen Carpender, home demonstration agent in Frontier County for the past two years, died on February 8.

Lincoln. Elsie Buxman resigned as supervising teacher at Northeast High School the first of the year because of ill health. Later she expects to join the foods staff of *McCall's Magazine*.

North Carolina

North Carolina Home Economics Association. Raleigh is the place and March 31 is the date scheduled for the annual meeting. Sectional meetings are scheduled for April 1.

State Department of Education. Rose Mary Codell is one of the new assistant state supervisors of home economics education. A graduate of the College of William and Mary and the University of Kentucky, she formerly taught in a Kentucky high school, at Murray State Teachers College in Kentucky, and at Winthrop College.

Flora MacDonald College. Katherine Cameron of Knoxville, Tennessee, is head of the textiles and clothing department.

Red Cross units have been added to the curriculum, making it possible for students to qualify for certificates to teach Red Cross courses in nutrition and home nursing.

Students in foods classes are giving a series of demonstrations to which the public is invited. Among the topics included in these demonstrations are: "Food for the Sick," "Sugar Substitutes," "Victory Dishes," "Cake Making Today," "Food for Lunches and the Lunch Room."

Greensboro College. As part of their regular college course some of the juniors and seniors are teaching a 10-week nutrition course for the parent-teacher associations of Greensboro. A question box, to which the mothers contribute, furnishes the topics for discussion.

Salem College. The seniors, co-operating with the Civilian Service Corps of the OCD, are advising the women of the community on the use of the food ration card. Emphasis is being placed on nutritional values.

North Dakota

North Dakota Agricultural College. February was a month of emphasis on better nutrition for all students on the campus. The quantity cooking class served breakfasts; the art department sponsored a nutrition poster contest; the English department had a contest for themes on nutrition; and the school paper emphasized some phase of nutrition in each issue.

Extension Service. In February the extension specialists conducted training meetings throughout the state for rural neighborhood leaders.

Farm Security Administration. FSA has stepped to the front as a food production agency for the duration and has chosen farm gardens as one of the important food fronts. The home management supervisors are at present planning with their borrowers for adequate gardens for year-round family use.

The state canning goal for all FSA families has been set at 100 quarts of vegetables, fruits, and meat per person, and families are being encouraged to improve storage facilities.

Irene Lee, homemaking supervisor of Benson County, resigned in January to go to the West Coast to seek employment in a war industry. Elizabeth Arzt, formerly homemaking supervisor in Rolette and Towner Counties, has succeeded her.

Work Projects Administration. Although WPA assistance was withdrawn from the school lunch program in North Dakota on January 19, reports from 73 of the projects indicate that at least 63 of the school lunch units will continue. Programs will be financed by school boards, parent-teacher associations, and parents in each community. In some instances, the work will be taken over by home economics departments, Red Cross canteen units, or the NYA. Several of the garden and canning units are making plans to operate again next year.

Although the WPA nursery school program came to an end on February 1, the units at Grand Forks and Devils Lake expected to remain open a month or more after that date. The nursery schools at Fargo, Casselton, Valley City, and Belcourt expect to continue to operate under local sponsorship until June or July.

The State Welfare Board will continue to operate the clothing depot until all clothing made on the state projects has been distributed. The Washburn sewing unit is continuing to operate under the sponsorship of the McLean County Welfare Board.

Vocational Homemaking Meetings. District meetings for all vocational homemaking teachers in the state were scheduled during February and March to consider necessary curriculum changes in keeping with the war effort.

Oklahoma

State Child-Care Committee. This committee, created in November, is composed of seven members, with A. L. Crable, superintendent of public instruction, as chairman. At the last meeting Dr. Mauker from the regional headquarters in Kansas City assisted the group in planning the year's work. The child-care program is to be put into operation in as many centers as can qualify under the Lanham Act.

Oklahoma A & M College. As the educational program becomes more accelerated and as community responsibilities of the homemaking teachers increase due to present conditions, the home economics staff feels that it would be beneficial both to the college teacher and to the high school teacher to have closer contacts and to discuss together problems with which both are concerned. As a result, part of the staff has already made visits to some schools, and the remaining members are making plans to visit other departments.

Katharine Kumler has returned from Ohio State University, where she completed work for a doctorate. Her thesis is entitled "The Implication of the Campus Co-operative Movement for Homemaking Education."

Helen Sanderson is a temporary instructor in the home life department. A graduate of the University of Kansas, she had her nursery school training at Merrill-Palmer School and then served as director of the Neighborhood House Nursery School in Detroit.

Evelyn Glascock, instructor in household arts, and Robert Allen of Stillwater were married on November 26.

Southwestern Institute of Technology. Elizabeth Gray, former home demonstration agent in Crawford County, Kansas, has joined the staff as instructor of foods.

University of Oklahoma. Katherine W. Miller, a graduate of Oklahoma A & M College, has succeeded Mrs. Anne B. Bailey as a teacher in the Nursery School. Mrs. Bailey accompanied her husband to Boston, where he is to do research at Massachusetts Institute of Technology.

As a means of determining the advantages of the vocational homemaking program in large high schools located in cities, an experimental program has been in progress at the Will Rogers High School in Tulsa since the fall of 1939. Lila M. Welch, professor of home economics, cooperating with the State Department of Education, has been supervising this work. Results of the program will be compiled at the end of this school year.

Extension Service. Eunice Stith, formerly home demonstration agent in LeFlore County, has been appointed assistant extension specialist in foods and nutrition.

Vivian Cochran, formerly assistant home demonstration agent in Caddo County, is now agent in LeFlore County. Helena Mauersberger is the new assistant in Caddo County.

Azalea Bynum has been appointed home demonstration agent in Latimer County.

Willa Dean Nicholson is now home demonstration agent in Texas County.

Oregon

Oregon Home Economics Association. The Association canceled its semiannual state meetings for 1942–43 and substituted a newsletter.

On February 17 the executive committee met in Portland to approve the revised constitution, discuss future plans and the election of a president and a treasurer by mail, and approve the granting of the annual scholarship of $25 to a home economics sophomore at Oregon State College.

Oregon State College. Omicron Nu, under the sponsorship of the campus nutrition committee, secured data on table waste in food per woman student per week among the sorority and co-operative house groups. A week's record was kept of students in each house who went without breakfast. Out of 13 houses reporting, 3 showed no student missing breakfast, while one house reported 30 per cent of its residents going without it.

Extension Service. During February and March community and neighborhood leaders made

contact with all rural Oregon families to spread information on victory gardens and the family food supply, including production and conservation of meat.

Vocational Education. Susan M. Burson of the U. S. Office of Education called an intraregional conference in Portland from February 17 to 20 to discuss "Wartime Services to Families." Washington, Montana, and Oregon were represented.

Ruth Chindgren, new itinerant teacher for adults, is conducting six classes for homemakers in four centers in Linn County.

Portland. *Portland Home Economics Association.* The high school teachers recently sponsored for Association members a tour of the Vancouver housing project, which covers 1,500 acres. Afterwards dinner was served at Hudson House.

Public Schools. Teachers at the Girls Polytechnic School gave a tea in January to honor Hilma Peterson, the new principal, recently of Spokane.

Portland schools, in co-operation with the OCD and under the sponsorship of the committee on day care of children of the Portland Council of Social Agencies, are offering a 45-hour training course for volunteers to assist in day nurseries for children of mothers working in defense industries.

South Carolina

South Carolina Home Economics Association. The 28th annual meeting on November 20 and 21 opened with a banquet at the Wade Hampton Hotel, Columbia. Presiding jointly were Lonnie I. Landrum, president, and Celia Swecker, president of the South Carolina Dietetic Association.

Guest speakers were Helen S. Mitchell of the Office of Defense Health and Welfare Services, who spoke on "The National Nutrition Program and Where It Leads"; Gladys Wyckoff, field secretary of the AHEA, who discussed "Home Economics in a World at War"; and Anna E. Boller of the National Live Stock and Meat Board, who talked on "The Meat Situation from the Packers' Standpoint."

Others on the program were Jane Ketchen of the South Carolina Extension Service; Myra Reagen, nutritionist for the southern region of the Office of Defense Health and Welfare Services, Atlanta, Georgia; and Elizabeth Watson, Office of Price Administration, Spartanburg.

Each college student club in the state is a member of the Association and the majority were represented at the meeting.

Although the membership is comparatively low, dues have been coming in rapidly since the first of the year.

Officers for the coming year are: president, Annie Mae Hildebrand, FSA, Orangeburg; vice-president, Elizabeth Monroe, Extension Service, Aiken; secretary, Mrs. John Milam, Columbia; and treasurer, Frances Kinard, Columbia.

Virginia

Virginia Home Economics Association. Special permission has been granted by Governor Darden for the Association to hold its annual meeting in Roanoke, as home economists throughout the state felt the need for a state meeting to co-ordinate their work into state and national emergency programs. April 9 and 10 are the dates.

State Child-Care Committee. Representatives from ten state agencies have been appointed by Governor Darden to serve on this committee. Its purpose is threefold: (1) to stimulate interest and understanding of child-care needs in the state; (2) to assist localities in planning a comprehensive program of services for the care of children; and (3) to foster and promote the co-ordination of effort among public and private agencies dealing with child care, particularly in those areas in which needs have grown as a result of increased employment of women. Etta Rose Bailey is the committee's executive officer.

Norfolk Nutrition Program. City, community, and neighborhood leaders in civic, church, and school organizations, totaling 2300, attended a Food-for-Victory School sponsored by the Norfolk Office of Civilian Defense on January 20 and 21 to begin an intensive, city-wide nutrition program. Speakers included Helen Mitchell and Eleanor Enright of the Office of Defense Health and Welfare Services and Mary Barber, foods consultant to the Secretary of War. Twelve leading businessmen who attended the School paved the way for interesting the Norfolk men in nutrition.

Richmond. *Nutrition Council.* Class instruction in nutrition has been brought up to date through the use of new methods. Each class, with its membership, is listed in the office of Mrs. Mildred Martin of the Virginia Electric and Power Company, who is in charge of securing teachers.

At least six substitute teachers, who have had nutrition refresher instruction, are on call for each lesson to fill in for regular instructors who are called out of town or must be absent for any other reason.

A committee has worked up supplementary sheets for each lesson, bringing material up to date in line with rationing and other emergency programs. A special sheet for teachers lists services and material available for their use in the city and makes class instruction uniform.

A letter is sent to each Richmond homemaker who professes interest in nutrition classwork, giving her definite information about material to be discussed.

To create further interest among parents through their children, contacts have been made with presidents of city high school student councils, and a nutrition program among these students is under way.

An exhibit of packed, quick, and restaurant lunches that was prepared by the Council and displayed in a local department store window for a week is making the rounds of industrial plants to follow up a nutrition program among employees.

Consumer Information Center. Opened February 1 in Richmond, the OCD-sponsored Center will serve as a clearinghouse for consumer defense activities and a distributing point for wartime information on all questions relating to consumer problems. Suggestions will be available on wise spending of money, information about the point-rationing program, new and substitute materials on the wartime market, and health. Exhibits are changed every 10 days. Home economists serve as consultants for the ones displayed and have the responsibility of seeing that the information given out is reliable. The gas company provides space and facilities.

School Lunch Program. Where local organizations and school boards can take over expenses for labor and other phases of the program heretofore furnished with WPA funds, now withdrawn, local school lunch programs are continuing. Home economists are being urged to encourage local organizations and school boards to set up budgets for this community service.

During the past year, 1766 schools in the state offered lunch service to more than 215,000 pupils. In the WPA Food Production and Preservation program, 414,951 quarts of food were canned, 14,769 pounds dried, and 15,574 bushels stored for school lunch use this winter.

Three central baking units have prepared baked products for two counties and one city. In Charlotte County, 20 schools have been served from the central kitchen. Whole-wheat, prune, and enriched white bread, cupcakes, and cookies are sent daily on school buses in boxes built in the vocational department.

Washington

Washington Home Economics Association. *Eastern Section.* The spring luncheon meeting was held at the Crescent Tea Room in Spokane on March 6. Leila Wall Hunt presided, and Elmina White was in charge of the program.

State Nutrition Committee. The state supervisors of home economics are serving as district representatives for the state nutrition committee.

Nursery School Programs. Nursery school participation programs have been initiated by home economics departments in seven cities and towns. These will be extended throughout the state, especially in areas where nurseries for children of mothers working in defense industries are being established.

State Board for Vocational Education. The home economics division has published "A Compilation of Films Available for Use in Home Economics Classes" by Ella Moyer of Spokane.

Northwest Nutrition Research Group. Meetings were held at the University of Idaho and the State College of Washington on December 14 and 15 to plan future research for Oregon, Washington, and Idaho. Off-campus guests were Margaret Fincke of Oregon and Clare Storvick of the University of Washington.

Home Nursing Refresher Conferences. Area refresher conferences on home care of the sick are being conducted throughout the state for home economics teachers. At the one in Chehalis, members of the nursing staff at the University of Washington lectured and gave demonstrations on good home nursing procedures.

State College of Washington. A seminar on recent home economics research is being given in Spokane for home economics graduates.

Mrs. Letitia Ayers has joined the staff as an instructor in institutional economics.

Dr. Jennie McIntosh has taught one Red Cross nutrition course, and plans are being made for a second.

Nutrition specialists from both the College of Home Economics and the College of Agriculture taught a nutrition course in Spokane. Those attending represented 11 fields.

"Nutrition Week" launched the campus nutrition program, which is being carried on by six students in co-operation with the home economics department. The student book store and other

campus "hang outs" are co-operating by establishing fruit juice and milk bars.

University of Washington. Dorothy Tilden is on leave to develop a new home economics department at Stanford University.

The Naval Pre-Flight Training School now occupies the dormitory which formerly housed women students.

The University Community Forum Series, established to further free discussion of public issues and urgent topics of the day, has arranged for Dr. Jennie Rowntree to spend the spring quarter out in the state. Dr. Rowntree's winter program has been enlivened by a class of 50 young men from the Quartermaster Corps.

Mrs. Wanda N. Sandin, a graduate of Iowa State College, is acting instructor in home economics for the winter and spring quarters.

Seattle. *HEWIB's.* Seattle HEWIB's have given a series of lectures and demonstrations on packing lunches, for the benefit of high school students in King County. The project was requested by school officials who discovered that many high school girls pack lunches for school-age brothers and sisters as well as for fathers, mothers, and older children working in industrial plants in this area.

Seattle HEWIB's serve as members of a nutrition consultation service, available at all Seattle public libraries.

Merle Bryan, home economist of the City Light Company, has solved the lunch problem for employees at its plant by offering at cost soup, salad or dessert, and coffee, cocoa, or milk. Nutrition score cards for lunches are displayed. Employees are invited to bring sandwiches from home to supplement the hot foods at the cafeteria. Miss Bryan also is taking the "Health for Victory Club" nutrition program to Seattle's four housing projects whose tenants are defense workers and their families.

Public Schools. A war services committee was appointed last fall to pass on proposed plans, materials, and programs presented to the schools because of special war needs. Services which the department of home economics has cleared through the war services committee include (1) distribution of Share-the-Meat materials to all families whose children attend Seattle schools, (2) instruction concerning good packed lunches, (3) emphasis on preservation and conservation in a unit "Preserve for Victory" in all foods courses in Seattle schools, (4) study and realignment of the home economics curriculum to place new emphasis on war needs and the Victory Corps program.

Spokane. Dr. Hazel M. Cushing, co-ordinator of family life education for Spokane, Pullman, and vicinity, has been appointed director of nursery schools for the Spokane area.

The emphasis in the Spokane-and-vicinity family life education program has been on the emergency care of children of working mothers, and four Victory Nursery Schools have been set up for children between the ages of two and five. The nutritional program for these schools is under the supervision of Ruth Ades, director of cafeterias and acting supervisor of home economics. The health of the children is under the direction of the school health department, of which Dr. O. M. Rott is head. Dr. Cushing and her assistant, Mrs. Anne Crampton, are co-operating with the children's division of the county welfare organization in attempting to provide foster day care for younger children and those who cannot conveniently attend nursery school.

West Virginia

Marshall College. The College has been designated as a teacher-training school for vocational home economics. This training program will permit use of Smith-Hughes or George-Deen funds to support the program to prepare teachers of home economics for vocational schools.

West Virginia University. The home economics students and staff are proud of their new Home Management House and Nursery School. The house will accommodate from six to eight girls, two staff members, and a baby. Julianne Wise is in charge.

On December 3 the girls in the house entertained President and Mrs. Charles E. Lawall, Dean and Mrs. C. R. Orton, and Ruth D. Noer and Mrs. Noer at the first official guest dinner in their new home.

On December 17, Miss Noer lighted the fire in the fireplace at an impressive ceremony attended by both students and staff members.

Martinsburg. The elementary schools are taking advantage of the Agricultural Marketing Administration aid and are setting up a program to serve milk to the children.

Wisconsin

Milwaukee. *Milwaukee Home Economics Teachers Association.* Dr. Eben J. Carey, dean of the Medical School at Marquette University, spoke at the February meeting on "Medical Science and the Public." The professional committee dis-

played posters concerning food and clothing problems in wartime.

Milwaukee Vocational School. Jeannette Oberndorfer left in February to join the WAVES. She will receive her officer's training at Smith College.

Extension Service. Because one of the most important aims of the year is an adequate food supply for all farm and village families, state-wide plans are being made for this project. Nine agricultural specialists co-operated in a series of meetings scheduled during March in every county in the state. Specialists taking part represent the fields of meat production, poultry, gardening, and fruit culture. Food preservation and storage will be given attention later in the season.

Agnes Hansen, formerly assistant state 4-H club leader in South Dakota, has been named assistant state 4-H club leader to succeed Grace Rowntree, now assistant state home demonstration leader.

Nellie McCannon, a graduate of the University of Illinois, recently succeeded Jean McFarlane Lavold as home demonstration agent in Milwaukee County.

Other transfers among the home demonstration agent personnel include the following: Gertrude Hoffmann from Shawano County to Dane County, Helen Stetzer from Brown County to Eau Claire County, and Elizabeth Davies from Iowa County to Sauk County.

Charlotte Clark Buslaff, district home demonstration agent from 1932 to 1936 and later extension specialist in nutrition, will succeed Catherine Stewart as home demonstration agent in Fond du Lac County.

The total attendance of rural women at the eight district Farm and Home Weeks was 1,650. These women expressed their appreciation that this program was brought to them this year, and many who could not have come to Madison but could attend a district program said they hoped that a similar plan would be carried out another year.

Farm Security Administration. Hulda Stettler resigned as home management supervisor in Polk County to do graduate work at the University of Wisconsin. Eva Belle Roth has taken her place.

Verna Thompson has been transferred to Arizona to be home management supervisor at Holbrook.

Helen Taylor, home management supervisor in Clark County, resigned to join the WAAC's and is now at Fort Des Moines.

Mrs. Sadie Klimeck Mundt and Mrs. Jessie Howell were recently appointed home management supervisors in Taylor and Dunn Counties.

Wyoming

Extension Service. The illustrated story of the unusual ranch kitchen of Mrs. Frank Harris of Jay Em Ranch which appeared in the February issue of the *Country Gentleman* was the result of the combined efforts of Mrs. Harris; Avis Campbell, Goshen County home demonstration agent; and Ellen R. Lindstrom, home management specialist at the University of Wyoming.

The Wyoming Ranch or Farm Family Record Book, designed to facilitate income-tax filing, was released by the Extension Service in January. Over 1200 copies had been ordered by February 1.

Farm Security Administration. Through home visits, preparation of home plans, and other contacts, FSA home management supervisors will stress increased production of both home-grown fruits and vegetables as a means of providing a more adequate diet for families during the coming year. Techniques and skills necessary to do a better production job will also be emphasized, and production to capacity will be the goal of every FSA family.

The FSA, in co-operation with other agencies and groups, expects within the next month to transport 15 year-round workers and families from labor-surplus areas to the Torrington area to help alleviate the labor shortage there. If this plan proves satisfactory, it is expected that a number of seasonal laborers will be transported to the Torrington area to make maximum production possible.

District Meetings on Wartime Problems. District meetings are being held to consider such current wartime problems as: community management of the school lunch; planning the year-round family food supply; planning victory gardens; gardening procedures in Wyoming; varied ways of conserving home-grown food; helping homes use the point-ration system; and the place of home economics in the high school Victory Corps program. Home economics teachers, administrators, representatives of county nutrition committees, home demonstration agents, and FSA home agents are co-operating in these meetings. The state superintendent of home economics is being assisted by members of the Extension Service in leading these conferences.

#3 This is part of a series on matters of professional, educational and public interest, primarily related to nutrition and the scientific approach to the food problem, and giving the background of the products of General Mills. These messages are being disseminated through a number of professional and specialized publications . . . in the hope of providing material useful for the readers.

MORE ABOUT THE

Food and Nutrition Board

OF THE

NATIONAL RESEARCH COUNCIL

IN A PREVIOUS ISSUE WE TOLD YOU THE IMMEDIATE PROBLEMS IT IS HELPING SOLVE. HERE WE EXPLAIN MORE ABOUT HOW THIS NATIONAL NUTRITIONAL "STEERING COMMITTEE" IS HELPING TO BUILD A HEALTHIER AMERICA

1. *What is our country's long-range nutrition problem?*

(*Answer*) There is relatively little "hollow hunger" in this country—to use the term being used to denote hunger you *feel*. But there is a great deal of "hidden hunger"—the dearth of "protective food factors" that reveals itself in various insidious ways.

"Hollow hunger" is largely an economic problem. "Hidden hunger" is chiefly a scientific and educational problem, concerned with the *quality* of diets people eat.

According to recent government data, only about a fourth of our people eat good diets. More than a third eat diets that are only fair, another third diets that are definitely poor.

Our long-range nutritional problem is *to correct this situation.*

2. *What approach is advised by the Food and Nutrition Board?*

(*Answer*) The authorities comprising the Food and Nutrition Board, recognizing the inadequacy of certain vitamins and minerals in the diets of a large proportion of our families, turned to bread, flour and other cereal products as logical "carriers" of these deficient food elements; recommended their "enrichment" or "restoration."

It is estimated that present-day Americans consumed, until recently, less than half as much vitamin B_1 as Americans of earlier generations. *The universal consumption of enriched flour and bread increases our consumption of this one vitamin alone over 60%.*

3. *What further steps were recommended?*

(*Answer*) In addition to enrichment of certain types of foods, the Food and Nutrition Board of the National Research Council gave impetus to a program of education. Carried out thus far through the government's Office of Defense Health and Welfare Services, this program is being promoted in two ways: (1) through the intensive work of national, regional, state and local nutrition committees, and (2) through cooperation of food advertisers.

4. *What is the objective of this education program?*

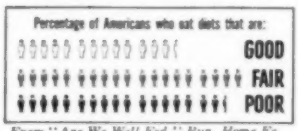
(*Answer*) One of the earliest steps by the Board for the National Nutrition Program was to prepare a "Food Guide." This guide to proper food selection (*at the right above*) is the basis of the national program of nutrition education. It lists eight broad classes of foods which should be eaten daily for the promotion of maximum health.

Diets including these foods in the recommended amounts provide liberally for needed "protective elements."

5. *What are the Board's growing duties?*

(*Answer*) As the United Nations war effort intensifies, our food problem also grows. Food shortages call for decisions as to kinds and quantities of specific foods indispensable for national health. *Such decisions must be taken into account in rationing.*

Hence the work of the Food and Nutrition Board grows in importance. Thanks to the application of this group to the scientific aspects of our food problem, America, *even in wartime*, will achieve the best possible level of nutrition for the promotion of our national good health and strength.



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EVERY DAY, EAT THIS WAY . . .
MILK and MILK PRODUCTS . . . at least a pint for everyone—more for children—or cheese or evaporated or dried milk.
BREAD and CEREAL . . . whole grain products or enriched white bread and flour.
ORANGES, TOMATOES, GRAPEFRUIT . . . or raw cabbage or salad greens—at least one of these.
MEAT, POULTRY or FISH . . . dried beans, peas or nuts once a week.
GREEN or YELLOW VEGETABLES . . . one big helping or more—some raw, some cooked.
EGGS . . . at least 3 or 4 a week, cooked any way you choose—or in "milk" dishes.
OTHER VEGETABLES, FRUIT . . . potatoes, other vegetables or fruits in season.
BUTTER and OTHER SPREADS . . . vitamin-rich fats, peanut butter, and similar spreads.
. . . THEN EAT OTHER FOODS YOU ALSO LIKE

General Mills, Inc., of Minneapolis, Minn., the country's largest processor of cereal grains, directs its policies to accord with the findings and recommendations of bodies such as the Food and Nutrition Board of the National Research Council, and gives its support to the National Nutrition Program. In these times of food scarcities, enriched flour and restored cereals must play an increasingly important part in the national dietary. (Some leading General Mills' products are illustrated at the right.)

All brands of family flour sold by General Mills have been enriched since June 1, 1942, or longer, including Drifted Snow "Home-Perfected" Flour and all flour in Sperry Pancake and Waffle Flour. Sperry Wheat Hearts also contain whole grain vitamin and mineral values.

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The deliciousness and nutritional value of Nucoa are not news to trained nutritionists, who know that Nucoa has been the leader in margarine's wonderful scientific development during the last dozen years. Though Nucoa furnishes the same amount of food-energy as butter (3,300 calories per pound) . . . is just as digestible as butter (over 96%) . . . and serves the menu in the same capacities as butter, Nucoa has qualities which butter does not duplicate.

Dependable year-round VITAMIN A value. Never less than 9,000 Vitamin A units in every pound of NUCOA! For Nucoa is fortified under laboratory test and control which *guarantee* this amount winter and summer.

Uniform flavor and texture. NUCOA's chief ingredients—pure vegetable oils churned in fresh pasteurized skim milk—come from American farms exclusively. And the delicious cultured-milk flavor of Nucoa . . . its evenly smooth texture . . . are *always the same,* for every step of processing is *controlled.* 102 tests daily assure this invariable quality.

Uniformly sweet and fresh. NUCOA is freshly made the year around. *There is no storage Nucoa!* Its fresh taste—every pound the same—puts Nucoa in the gourmet class. Yet Nucoa is inexpensive.

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HERE'S HOW IT ADDS UP
1 No. 2½ can Libby's Fruit Cocktail = 2½ cups (approx.) drained fruit
Carnival Custard takes ½ cup
Salad-Dessert takes 1 cup
Isles O' Spice takes 1 cup
2½ cups

CARNIVAL CUSTARD

2 tbsp. cornstarch
¼ tsp. salt
¼ cup sugar
1 egg
1 cup milk
1 cup water
1 tsp. vanilla
½ cup Libby's Fruit Cocktail

Mix cornstarch, salt and sugar. Beat egg slightly and add milk and water. Add to cornstarch mixture. Cook over hot water, stirring constantly until thick. Cool. Add vanilla. Pour into 4 serving dishes and top with Libby's Fruit Cocktail. This one-egg custard is interesting to demonstrate in a lesson on custards.

SALAD - DESSERT

½ pkg. strawberry gelatin
1 cup Libby's Fruit Cocktail
Salad greens
Mayonnaise

Dissolve gelatin in 1 cup boiling water. Let chill until partially congealed, then add fruit. Pour into 6-inch ring mold and chill until firm. Serve on salad greens with mayonnaise in center. (Serves 4).

ISLES O' SPICE

¼ cup shortening
¾ cup brown sugar
¼ tsp. salt
1 egg
1 cup sifted cake flour
½ tsp. cloves
½ tsp. cinnamon
¾ tsp. soda
½ cup milk

Cream shortening, sugar, and salt. Add unbeaten egg and beat until fluffy. Sift flour, spices, and soda together. Add dry ingredients alternately with milk, beginning and ending with dry ingredients. Fill greased muffin pans ⅔ full. Bake in a moderately hot oven (375°F.) about 20 min. (Makes 8 to 10 cakes; only 4 are used for this dish.) This one-egg spice cake could well be featured in a cake-making lesson.

FRUIT TOPPING

Dissolve 4 tsp. cornstarch in 3 tbsp. orange and 1 tbsp. lemon juice. Heat to boiling 1 cup syrup from fruit. Add cornstarch mixture and cook until thick. Add 1 cup Libby's Fruit Cocktail. Serve, hot or cold, over cakes. (Serves 4).

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For the guidance of Teachers—the Sealtest Kitchen publishes valuable nutritional information regularly in the Sealtest Food Adviser. This is FREE to teachers on request. We believe it will help you in your class work. Send for your copy.

FREE! Just send us your name and address and you'll receive a free copy of the latest Sealtest Food Adviser. Address Sealtest Laboratory Kitchen, 230 Park Avenue, New York City.

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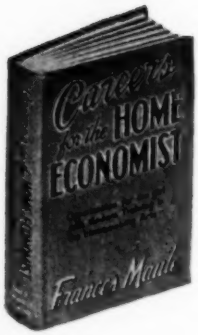

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Packing the needed *Pick-up* in lunch box meals!

New, practical booklet shows how to prepare husky, healthful lunch box meals to reduce after-lunch letdown, help increase war production

A timely book . . . on a vital subject! With more than five million men and women in industry now carrying their lunch, it is essential to the war effort that these "production soldiers" eat the right kind of mid-shift meals. This 16-page booklet sums up the fundamentals of planning lunch box meals that help workers stay strong, vigorous and on the job. It carries the seal of acceptance of the Committee on Foods and Nutrition of the American Medical Association.

Send for free copy. Desk copies of "HOW TO PACK LUNCH BOXES FOR WAR WORKERS," without charge to home economists and teachers. Extra quantities available at 2c each. Write

CONSUMER EDUCATION SERVICE
WESTINGHOUSE ELECTRIC & MFG. CO.
354 Fourth Street · Mansfield, Ohio

High Spots of Concrete Information in this Booklet

- Plan the Lunch Box with the Other Meals in Mind
- What is a Good Lunch?
- Every Lunch Box Should Contain These Foods
- The Work They Do Makes a Big Difference
- When War Workers Eat Depends on When They Work
- Hints on Packing a Lunch Box
- Tips from the People Who Eat the Lunch
- Food Shortages . . . and Lunch Box Meals
- 30 Menus for Nutritious Lunches
- 69 Tested Recipes for Lunch Box Foods

Westinghouse *ELECTRIC APPLIANCE DIVISION*

TUNE IN ON JOHN CHARLES THOMAS, WESTINGHOUSE PROGRAM, NBC, SUNDAY AT 2:30 P.M., E.W.T.

• During this war you may get "only a taste" now and then of Dole Pineapple. The reason is good—¾ of the fruit and ⅓ of the juice we pack are going to the Armed Forces.

• Future crops of Dole Pineapple are being prepared for you. The fields we are putting in now, for example, will bear fruit in 1945.

HAWAIIAN PINEAPPLE PRODUCTS

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Wartime Conservation Hint

Health Is Helped by the Use of WAX in Homes!

Regular wax-polishing of floors is sound home conservation because wax protects as well as beautifies. It is a valuable health measure, too. Waxed floors stay clean longer; are easier to keep clean. Dust and dirt do not readily adhere to wax-polished surfaces. Johnson's Wax seals against dirt and moisture, thus removing many sources of germs.

Furniture, too, is best protected from deterioration with economical Johnson's Wax. And woodwork, Venetian blinds, luggage, parchment lamp shades, baby carriages . . . a host of articles exposed to dirt daily can be kept cleaner, more sanitary with a preserving film of Johnson's Wax. "A waxed home is a clean home and a clean home is a sanitary one."

New sound motion picture — "Beauty For Keeps." This 29-minute picture dramatizes Protective Housekeeping in an entertaining story. Available in 16 millimeter. Write for details on free showing in your school.

S. C. Johnson & Son, Inc.

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Makers of Johnson's Wax (Paste, Liquid and Cream) and Johnson's Self-Polishing Glo-Coat.

★ **Buy U. S. War Savings Bonds and Stamps** ★

FOR A VICTORY MEAL-"Make it with Milk!"

CREAMED CORN AND CARROTS

1 No. 2 can whole kernel corn (or 1 pt. cut from cob)
1 No. 2 can shoestring carrots (or 2 bunches, sliced)
1 tsp. salt
Few gratings onion
1 cup water
½ cup Carnation Milk undiluted
1 tbsp. butter

Boil vegetables and seasonings briskly in water till tender. (About 10 min. if raw.) Add milk and butter. Heat and serve. Serves 6.

Double-Rich—AND PATRIOTIC!

EXTRA NOURISHMENT . . . EXTRA FLAVOR—
WHEN YOU CREAM FOODS WITH CARNATION

The recipe given here is only a suggestion. The point is that when you urge your students to use double-rich, undiluted Carnation to cream vegetables, fish, meat or leftover combinations, you're right in step with the National Nutrition Program. More milk in the diet! And, with double-rich Carnation, double amounts of milk solids and milk fats.

Send for other practical suggestions in the excellent teaching aid called "Growing Up With Milk." Address Carnation Company, Dept. 711B, Milwaukee, Wis.

IRRADIATED
Carnation Milk

"FROM CONTENTED COWS"

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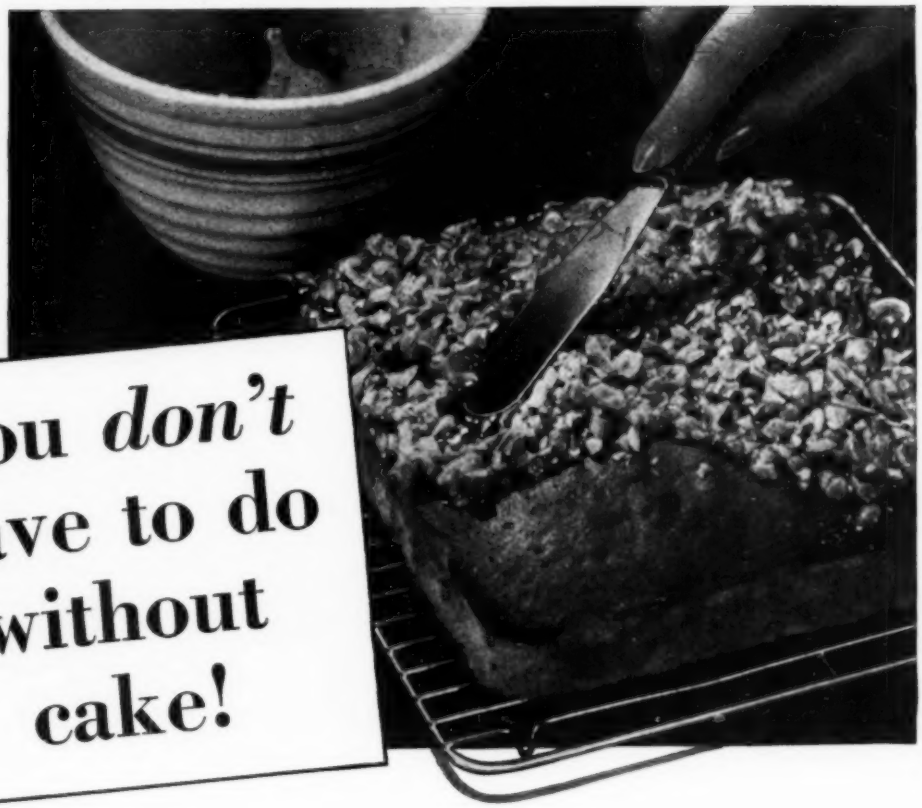

You *don't* have to do without cake!

For a Timely Project, try this Sugarless Crisco Cake!

Simple home entertaining is coming into its own again. Wartime lunch boxes call for desserts. Fortunately, in spite of growing shortages, we needn't do without cake.

This delicious cake from the Crisco kitchens requires no sugar or hard-to-get ingredients. Making it can be an interesting project . . . complete in one class period. This sugarless cake has all the qualities of Crisco-made cakes: velvety texture . . . full-flavored . . . lighter. In fact, no other shortening—not even the most expensive—gives such light cakes!

Like hundreds of other Home Economists, you'll be pleased with Crisco's lighter cakes, flaky, tender pie crust, crisp, digestible fried foods. Try Crisco.

PROCTER & GAMBLE
Home Economics Department, Ivorydale, Ohio

HONEY-NUT CAKE

½ cup Crisco • 1 cup light corn syrup
½ teaspoon salt • 1 teaspoon vanilla
2 eggs • 2½ cups sifted cake flour
2½ teaspoons baking powder • ½ cup milk

Combine Crisco, salt and vanilla. Add syrup gradually, beating well after each addition. Add eggs and beat well. Sift dry ingredients together and add alternately with milk. Bake in flat pan (approximately nine inches square) in a moderately hot oven (375° F.).

HONEY-NUT TOPPING. Blend together 1 cup chopped peanuts and ⅔ cup honey and spread on top of hot cake. Toast in hot oven (425° F.) for 8-10 minutes.

Now in carton-packed glass jars. Same fine product.

CRISCO —AMERICA'S BEST-LIKED ALL-VEGETABLE SHORTENING

HOUSEHOLD'S CONSUMER EDUCATION PROGRAM BEGINS 12th YEAR

•

THIS MONTH we are celebrating the twelfth anniversary of the beginning of Household's consumer education program. We realize that the development of widespread interest in consumer education is responsible for our program's growth and sturdy life.

Many have wondered at the far-sightedness of a small-loan company which attempted to improve the financial health of its customers and the general public. The job was undertaken in 1931, a depression year in our company's business that is paralleled by this tough year of 1943.

Twelve years ago no one could have foreseen the part consumer education would play today on the Home Front.

Working under wartime economies, we are busy revising the "Money Management" and "Better Buymanship" booklets and trying to provide new helps called for by war conditions. In January we published an Income Tax Guide; in February, a Point Ration Budget Calendar. Just now we are working on materials covering other special problems that war is bringing to the family.

We are grateful for your cooperation and are confident that you will continue to help us, by criticism and suggestion, to measure up to this opportunity.

DEPARTMENT OF RESEARCH . . . BURR BLACKBURN, *Director*

BERNICE DODGE, *Editor* — LEONE ANN HEUER, *Textiles and Furnishings*

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HOUSEHOLD FINANCE *Corporation and Subsidiaries*

ESTABLISHED 1878

HEADQUARTERS: CHICAGO . . . A small-loan company operating branch offices in 24 states and Canada, under legislation modeled after the Uniform Small Loan Law.

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Teach this

8-POINT PROGRAM

for making sheets last longer!

Cotton is a fighting fabric. Thousands of miles of cotton fabric are being woven today to make uniforms, bedding, bandages — over 390 items — for our armed forces. Help the cotton industry deliver the goods to Uncle Sam by teaching sheet conservation to your classes!

1. Fit the sheets to the bed! Tugging at a too-short sheet often strains and rips it.

2. Learn how to make a bed! A peaceful sleeper, securely covered . . . untroubled by wrinkled sheets . . . takes less out of a sheet's life than a restless sheep-counter trying to get comfortable.

3. Take a stitch in time! A tiny tear can mean a ruined sheet, if you let it go. Use the various press-on mending tapes . . . or learn how to mend neatly and quickly by hand or on the sewing machine.

4. Remove spots immediately! Don't give them a chance to "set", and become permanent.

5. Wash sheets properly! Too hot water . . . improper rinsing . . . careless hanging and drying . . . all mean a shorter life for your sheets.

6. Iron sheets gently! A heavy hand and a too-hot iron can weaken the sheet.

7. Use all your sheets! Don't make 3 or 4 take all the wear. Use your sheets in rotation and distribute wear evenly — and use them as sheets *only*. Sheets are not made to be laundry bags.

8. Buy sheets carefully! It has always been economical to buy quality — now, it's patriotic, too! When you buy sheets, buy only the *best!* — buy Lady Pepperell Sheets!

WRITE FOR A FREE SUPPLY of Pepperell's new war-time booklet, "Sheets and Blankets — How To Buy and Conserve Them". Use it as a guide for classroom lectures . . . distribute it to your students. Also, ask for a booking of Pepperell's conservation movie, "A Gift for the General". 26 minutes of fast-moving scenes showing how to get extra wear from textiles of all varieties. 16 or 35 mm., with sound.

PEPPERELL MANUFACTURING COMPANY, 160 STATE STREET, BOSTON, MASS.

Lady Pepperell

PEPPERELL FABRICS

Sheets and Blankets

Textile consultants to vital war industries realize the importance of attractive, comfortable uniforms for morale and increased production. Production records show that women work better when they look their best. That is why efficiency engineers and home economics consultants prefer uniforms in Celanese fabrics. Long wear and repeated launderings do not affect the original crisp, tailored beauty of these famous fabrics. Important war industries have selected Celanese fabrics for these practical times because they . . .

- stand up under the stress and strain of war work.
- satisfy the feminine need for beauty.
- wash or dry-clean without losing their original texture and trim smartness.
- are not affected by perspiration or climatic conditions.
- tailor to crisp, geometric perfection. Wrinkles from normal wear hang out overnight.
- come in colors tested for fastness.

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